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IMPERIAL GAZETTEER OF INDIA

VOLUME VI

Argaon.—Village in the Akot *tāluk* of Akola District, Berār, situated in 21° 7′ N. and 76° 59′ E. Population (1901), 3,131. The place, the name of which means 'village of wells,' is mentioned in the *Ain-i-Akbarī* as the head-quarters of a *pargana*. On the broad plain, intersected by watercourses, before Argaon, General Wellesley gained a great victory (November 29, 1803) over the Nāgpur army under Venkaji, brother of Raghujī Bhonsla. The battle was followed up by the capture of Gāwīlgarh. A medal, with a bar commemorative of Argaon, was struck in 1851 and presented to the surviving officers and soldiers.

Ariankāvu.—Village, pass, and shrine in the Shencottah *tāluk* of Travancore State, Madras, situated in 8° 59′ N. and 77° 9′ E., in a circular valley about a mile from the head of the pass, 54 miles from Trivandrum, 50 from Quilon, and about 50 from Tinnevelly. Population (1901), about 1,000. The principal line of road from Tinnevelly via Shencottah into Travancore passes by this village, as also does the Tinnevelly-Quilon Railway. The extension of the tea- and coffee-planting industry has increased its importance. It contains a temple of great antiquity dedicated to Sāsthā, which is asserted to have been built by Parasu Rāma. It lies in a hollow surrounded by hills. The whole of the pass, about 18 miles in length, presents a succession of grand forest scenery.

Ariyalūr Subdivision.—Subdivision of Trichinopoly District, Madras, consisting of UDAIYĀRPĀLAIYAM and PERAMBALŪR *tāluks*.

Ariyalūr Town.—Chief town of the *zamīndāri* of the same name in the Udaiyārpālaiyam *tāluk* of Trichinopoly District, Madras, situated in 11° 8′ N. and 79° 5′ E. Population (1901), 7,370. It is the head-quarters of the Ariyalūr subdivision, which is in charge of a Deputy-Collector and Magistrate, and comprises the *tāluks* of Perambalūr and Udaiyārpālaiyam. It also contains a District Munsif's court and a hospital, and a European firm has a screw cotton press here. Satins

of various patterns are made in the town by the foreign weaver-caste of the Patnūlkārans, which are most handsome and effective and have a wide reputation. The chiefs of Ariyalūr experienced numerous vicissitudes during the Wars of the Carnatic and the government of the Nawāb. When Trichinopoly District passed into the hands of the East India Company in 1801, the *poligār*, or chief, was in receipt of a monthly allowance of Rs. 700, the estate being under the management of an agent of the Nawāb. The *zamīndāri* continued under the management of the Company for some years, the proprietor being allowed one-tenth of its net income; but in 1817 he obtained a *sanad* (title-deed) for the village in which he resided and a number of others adjoining it, the annual value of which was equal to one-tenth of the gross revenue of the estate, and he was required to pay a *peshkash* of about Rs. 1,090. The *zamīndārs* are Vanniyas by caste, and originally held the estate as *arasukāvalgārs* or 'heads of police.' The property has since been dismembered into seventeen portions, as a result of civil court sales held to discharge the debts incurred by its owners. Ariyalūr has a particularly fine market, which is regarded as one of the best in Southern India. A large temple of comparatively recent date, about 4 miles from the town, is a sort of local Lourdes, devout Hindus taking their sick to it in the hope that their cure will be effected at the hands of the founder of the temple.

Arkalgūd.—Southern *tāluk* of Hassan District, Mysore, lying between 12° 31′ and 12° 50′ N. and 75° 56′ and 76° 12′ E., with an area of 261 square miles. The population in 1901 was 76,775, compared with 75,812 in 1891. The *talūk* contains three towns, Arkalgūd (population, 4,903), the head-quarters, Konanūr (2,328), and Basavāpatna (1,684); and 300 villages. The land revenue demand in 1903–4 was Rs. 1,25,000. The Hemāvati river forms the northern boundary, and the Cauvery runs through part of the south. The rice crop served by the river channels is one of great yield and certainty. Near the large tanks rice is followed by a crop of onions, which is very profitable. The west of the *tāluk* up to the borders of Coorg is jungly and hilly. In the south are numerous coco-nut and areca-nut gardens, but the areca-nut is the coarse variety called *godu*. On the high watershed in the centre much tobacco is grown, which is converted into snuff.

Arkāvati.—A tributary of the CAUVERY, in Mysore, about 120 miles long, having its source on Nandidroog, and flowing through Bangalore District from north to south with a slight westerly direction. The Kumudvati from the west joins it south of Nelamangala, and the Vrishabhāvati from Bangalore on the east, north of Kānkānhalli. In its upper course are some large tanks, including Hesarghatta, the source of the water-supply of Bangalore. From Sāvandurga southwards it runs mostly

through a wild country, amid rocky hills and forest, and is therefore not much used for irrigation.

Arkonam.—Town in the Wālājāpet *tāluk* of North Arcot District, Madras, situated in 13° 5′ N. and 79° 40′ E. It has sprung into importance only since it became a railway junction. Here the north-west and south-west lines of the Madras Railway meet, and here also is the terminus of the branch of the South Indian Railway which runs from the main line at Chingleput. Population (1901), 5,313, many of whom are railway employés. The town is a Union under the Local Boards Act, and the head-quarters of a deputy-*tahsīldār* and sub-magistrate.

Armagon (*Armeghon*, *Armugam*).—Village in the Gūdūr *tāluk* of Nellore District, Madras, situated in 13° 59′ N. and 80° 10′ E., on the Bay of Bengal. The place is now sometimes called Monapālem, from a neighbouring village with a lighthouse, and sometimes Dugarāzupatnam, from another village where open communication with the sea can be maintained. It is said to be named after one Arumuga Mudaliyār, by whose assistance one of the earliest English settlements on the Coromandel coast, consisting of a factory defended by twelve pieces of cannon, was established in 1625. A lighthouse is maintained at Monapālem in 13° 53′ N. and 80° 8′ E., which gives a flash every 20 seconds visible 14 miles away, and warns vessels off the Armagon shoal, 6 miles from shore. The shoal is about 10 miles long, and the shallowest patch on it has 1¾ fathoms of water, and lies from 3½ to 5½ miles east-by-north of the lighthouse. The still water inside the shoal is called Blackwood's Harbour, after Sir Henry Blackwood, once admiral on this coast, who had it charted, and suggested that it would make a practicable harbour. Seven miles north of Armagon lighthouse is Dugarāzupatnam, a small village of 2,388 inhabitants on the Buckingham Canal. Being at the mouth of an entrance to the sea from the backwater in front of which Armagon stands, it was apparently the port of Armagon, and the two places are often spoken of as identical. Near by are the remains of an old fort built by the East India Company.

Armūr Tāluk.—*Tāluk* in Nizāmābād District, Hyderābād State, with an area of 1,038 square miles. The population in 1901, including *jāgīrs*, was 122,455, compared with 123,285 in 1891. The *tāluk* contains two towns, ARMŪR (population, 9,031), the head-quarters, and BĀLKONDA (5,118), a *jāgīr* town; and 160 villages, of which 51 are *jāgīr*. The land revenue in 1901 was 3·6 lakhs. The statistics include the sub-*tāluk* of Bīmgal, which was merged in Armūr in 1905, and had an area of 491 square miles and a population of 54,290 in 1901. Rice is largely raised by tank irrigation. The *tāluk* is hilly in the centre, and the Godāvari flows through the north.

Armūr Town.—Head-quarters of the *tāluk* of the same name in Nizāmābād District, Hyderābād State, situated in 18° 48′ N. and 78° 16′ E., 16 miles north-east of Nizāmābād town. Population (1901), 9,031. It contains a sub-post office, a police inspector's office, a dispensary, and a school with 127 pupils. Silk cloth and *sārīs* are largely manufactured.

Arni Subdivision.—Subdivision of North Arcot District, Madras, consisting of the *zamīndāri tahsīl* of ARNI and the *tāluks* of POLŪR and WANDIWĀSH.

Arni Tahsīl.—*Zamīndāri tahsīl* in the south of North Arcot District, Madras, lying between 12° 29′ and 12° 49′ N. and 79° 7′ and 79° 22′ E., and comprising the Arni *jāgīr*. The area is 184 square miles, or less than any other *tahsīl* in the District. Number of villages, 139; population in 1901, 96,542, compared with 91,730 in 1891; head-quarters, ARNI (population, 12,485); *peshkash* payable to Government (including cesses), Rs. 21,000. The *jāgīr* was granted to an ancestor of the present holder early in the seventeenth century, as a reward for military services, by the Marāthā chief Shāhjī during his expedition into the Carnatic.

Arni.—Town in North Arcot District, Madras, situated in 12° 41′ N. and 79° 17′ E. It is the head-quarters of a Deputy-Collector and other officials; population (1901), 12,485. The most interesting building is the fort, an almost square structure which has been dismantled to a great extent. Until thirty years ago, Arni was a military station and at one time a very large one, as the long lines of deserted barracks testify. These barracks are fast falling into disrepair, but portions are still used as public offices. There are two old European cemeteries near the western walls. An imposing monument in the shape of a high column stands on one side of the parade ground; it was erected, as an inscription shows, by an officer of the garrison in memory of a brother officer whom he had shot in a duel. At the north-west angle of the enclosure is a fine old temple somewhat recalling that in the Vellore fort, though it does not contain such excellent sculpture. A considerable industry in the manufacture of silk and cotton fabrics is carried on in the town.

Aror.—Ruined town in the Rohri *tāluka* of Sukkur District, Sind, Bombay, situated in 27° 39′ N. and 68° 59′ E., 5 miles to the east of Rohri town. Population (1901), 939. It was formerly the capital of the Hindu Rājās of Sind, and is said by native historians to have been taken from them by the Muhammadans about A.D. 712. It was built on the bank of the old course of the Indus—then known as the Mihrān—and was destroyed by the earthquake which, about 962, diverted the river into its present channel. Among the ruins is a mosque built by Alamgīr. There is also a cave, considered by

Hindus to be sacred to the goddess Kālika Devī, where an annual fair is held.

Arrah Subdivision.—Head-quarters subdivision of Shāhābād District, Bengal, lying between 25° 10′ and 25° 46′ N. and 84° 17′ and 84° 51′ E., with an area of 913 square miles. The subdivision is a low-lying alluvial flat, bounded on the north by the Ganges and on the east by the river Son. The population in 1901 was 699,956, compared with 743,582 in 1891, the density being 767 persons to the square mile. It contains two towns, ARRAH (population, 46,170), the head-quarters, and JAGDĪSPUR (11,451); and 1,245 villages, one of which, BIHIYĀ, on the East Indian Railway, is an important trade centre. Arrah is famous on account of the gallant defence of the Judge's house by a handful of Europeans and Sikhs against an overwhelming force of mutineers in 1857.

Arrah Town (*Arā*).—Head-quarters of Shāhābād District, Bengal, situated in 25° 34′ N. and 84° 40′ E., on the East Indian Railway, 368 miles from Calcutta. The population increased from 39,386 in 1872 to 42,998 in 1881, and to 46,905 in 1891, but fell to 46,170 in 1901, the decline being probably due to plague. Of the population in the last year, 32,903 were Hindus and 12,797 Musalmāns, while among the remainder were 433 Jains.

The town of Arrah is invested with a special historical interest as being the scene of a stirring episode in the Mutiny of 1857. A body of rebels, consisting of about 2,000 sepoys from Dinapore and four times as many armed villagers under Kuar Singh, marched in the end of July on Arrah. They reached the town on the 27th of that month, and forthwith released all the prisoners in the jail and plundered the treasury. The European women and children had already been sent away, but there remained in the town about a dozen Englishmen and three or four other Christians of different races. The Commissioner of Patna, Mr. Tayler, had supplied a garrison of 50 Sikhs. At this time the East Indian Railway was in course of construction, under the local superintendence of Mr. Vicars Boyle, who fortunately had some knowledge of fortification. He occupied two houses, now known as the Judge's houses, the smaller of which, a two-storeyed building about 20 yards from the main house, was forthwith fortified and provisioned. The lower windows, &c., were built up, and sand-bags ranged on the roof. When the news came that the mutineers were advancing along the Arrah road, the Europeans and Sikhs retired to the smaller house. The rebels, after pillaging the town, made straight for Mr. Boyle's little fortress. A volley dispersed them, and forced them to seek the shelter of the larger house, only a few yards off, whence they carried on an almost continuous fire. They attempted to burn or smoke out the little garrison, and tried various other safe modes of attack; but they

had no guns. Kuar Singh, however, produced two small cannon which he had dug up, and artillery missiles were improvised out of the house furniture. In the small house there was no thought of surrender. Mr. Herwald Wake, the Magistrate, put himself in command of the Sikhs, who, though sorely tempted by their countrymen among the mutineers, remained faithful throughout the siege. A relieving party of 150 European troops, sent by water from Dinapore, fell into an ambuscade on landing in Shāhābād; and as time passed away and no help arrived, provisions and water began to run short. A bold midnight sally resulted in the capture of four sheep, and water was obtained by digging a well 18 feet deep inside the house. A mine of the enemy was met by countermining. On August 2 the besieged party observed an unusual excitement in the neighbourhood. The fire of the enemy had slackened, and but few of them were visible. The sound of a distant cannonade was heard. Before sunset the eight days' siege was at an end, and on the following morning the gallant garrison welcomed their deliverers—Major Vincent Eyre, with 150 men of the 5th Fusiliers, a few mounted volunteers, and 3 guns with 34 artillerymen. Major Eyre had dispersed Kuar Singh's forces on his way to Arrah, and they never rallied.

Arrah was constituted a municipality in 1865. The income during the decade ending 1901–2 averaged Rs. 52,000, and the expenditure Rs. 47,000. In 1903–4 the income was Rs. 55,000, including Rs. 21,000 derived from a tax on persons (or property tax), Rs. 11,000 from a water rate, Rs. 5,000 from a tax on vehicles, Rs. 4,000 from a municipal market, and Rs. 6,000 as special grants from Provincial and Local funds for medical purposes. The incidence of taxation was R. 0–14–3 per head of the population. In the same year the expenditure amounted to Rs. 48,000, the chief items being Rs. 10,000 on conservancy, Rs. 5,000 on water-supply, Rs. 8,000 on medical relief, and Rs. 5,000 on roads. The town is supplied with filtered water from the Son; the works, which cost upwards of 4 lakhs, were opened in 1894. The town contains the usual public buildings of a District head-quarters. The District jail has accommodation for 278 prisoners, who are employed chiefly on oil-pressing, thread-twisting, and carpet-making.

Arsikere.—Northern *tāluk* of Hassan District, Mysore, lying between 13° 5′ and 13° 33′ N. and 76° 2′ and 76° 26′ E., with an area of 486 square miles. The population in 1901 was 79,588, compared with 65,306 in 1891. The *tāluk* contains three towns, Arsikere (population, 3,565), the head-quarters, Bānāvar (2,422), and Hāranhalli (2,117); and 354 villages. The land revenue demand in 1903–4 was Rs. 1,62,000. The surface is very undulating. In the west is a chain of rocky hills, covered with scrub jungle. In the north are the Hirekalgudda hills, on which is the

temple of Mālekal Tirupati. The drainage is northwards to the Vedāvati river, but there are few streams or tanks. In the south are several Amrit Mahāl grazing-grounds, and a good stamp of cattle is bred, which is in some demand in the Malnād. The prevailing soil is grey and stony. *Rāgi* is grown everywhere, while in the west and south chillies are largely cultivated for the Malnād. Coco-nuts allowed to remain on the tree till they drop, called *kobri*, are much prized, and are exported to Tiptūr for the Bangalore and Bellary markets. They are grown in the north in low-lying ground without irrigation.

Aruppukkottai.—Head-quarters of the Tiruchuli *tahsīl* of the Rāmnād estate, in Madura District, Madras, situated in 9° 31′ N. and 78° 6′ E. Population (1901), 23,633. It is a thriving place and its population has doubled in the last twenty years; but it suffers from lack of communications, being 13 miles distant from Virudupatti, the nearest railway station. The inhabitants consist chiefly of Sedans, who are weavers, and of Shānāns, an enterprising community in commercial matters, who have brought the town to its flourishing condition. The place has at present to support a force of punitive police, owing to the recent disturbances caused by the claims of the people of the latter caste, which is reckoned low in the social scale, to enter Hindu places of worship. The chief industries are cotton-weaving and dyeing. The fabrics made here are exported to Colombo, Singapore, and Penang.

Arvī Tahsīl.—Northern *tahsīl* of Wardhā District, Central Provinces, lying between 20° 45′ and 21° 22′ N. and 78° 3′ and 78° 39′ E., with an area of 890 square miles. The population in 1901 was 137,737, compared with 131,174 in 1891. The density is 155 persons per square mile. The *tahsīl* has two towns, ARVĪ (population, 10,676), the head-quarters, and ASHTĪ (5,237); and 299 inhabited villages. The *tahsīl* is an important cotton tract, and is known also for its fine breed of cattle. The eastern portion is hilly, while to the west a narrow strip of very fertile black soil lies along the bank of the Wardhā river. Excluding 180 square miles of Government forest, 70 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 472 square miles. The demand for land revenue in the same year was Rs. 1,98,000, and for cesses Rs. 19,000.

Arvī Town.—Head-quarters of the *tahsīl* of the same name in Wardhā District, Central Provinces, situated in 20° 59′ N. and 78° 10′ E., 22 miles from Pulgaon station. Population (1901), 10,676. Arvī was created a municipality in 1867. The municipal receipts during the decade ending 1901 averaged Rs. 14,200. In 1903–4 the income was Rs. 27,000, derived principally from octroi and market dues. The town is a flourishing centre of the cotton trade, and contains 7 ginning factories and 3 presses, most of which have been erected within the five

years ending 1903. Their aggregate capital is 6½ lakhs, and the profits for 1904 were Rs. 79,000. The water-supply is inadequate, and a water-works scheme is under consideration. A weekly cattle market is held here. Arvī has an English middle school, a dispensary, a public library, and a fine *sarai* constructed at a cost of Rs. 15,000 by one of the residents. A large market to cost Rs. 40,000 is shortly to be built in the town.

Aryalūr.—Subdivision and town in Trichinopoly District, Madras. *See* ARIYALŪR.

Asafnagar.—'Crown' *tāluk* in the Atrāf-i-balda District, Hyderābād State, also known as the *Gharbi* or 'western' *tāluk*, with an area, including *jāgīrs*, of 402 square miles. The population in 1901 was 56,928, compared with 47,264 in 1891. The *tāluk* contains 97 villages, of which 33 are *jāgīr*, and Asafnagar (population, 1,694) is the head-quarters. The land revenue in 1901 was 2 lakhs. The *tāluk* is composed of sandy soils, and is well supplied with tanks. The *paigāh tāluk* of Farīdābād, with 31 villages, a population of 8,446, and an area of about 126 square miles, lies to the west.

Asandi.—Village in the Kadūr *tāluk* of Kadūr District, Mysore, situated in 13° 42′ N. and 76° 6′ E., 5 miles from Ajjampur railway station. Population (1901), 1,006. In ancient times it was a place of considerable importance. Under the Gangas and the Hoysalas it was the chief city of a principality, which in the eighth century was governed by Vijayāditya, son of the king Srīpurusha, and in the twelfth and thirteenth centuries by a line of Ganga chiefs.

Asansol Subdivision.—North-western subdivision of Burdwān District, Bengal, lying between 23° 25′ and 23° 53′ N. and 86° 48′ and 87° 32′ E., with an area of 618 square miles. Until 1906 it was known as the Rānīganj subdivision. The north-western part consists of a rocky undulating country, which merges in the south and south-east in the alluvial plain stretching along the Dāmodar river. The population in 1901 was 370,988, compared with 310,273 in 1891. It contains two towns, ASANSOL (population, 14,906), its head-quarters and a great railway centre, and RĀNĪGANJ (15,841), its former head-quarters; and 811 villages. The subdivision is now the most progressive part of the District, but its density of population, 600 persons to the square mile, is still slightly less than that of Kātwa. It differs from the rest of Burdwān, which is entirely agricultural in character; the alluvial soil here changes to laterite, and rich coal- and iron-fields have of recent years caused a continuous increase in the number and prosperity of its inhabitants. Brass and bell-metal ware and shellac and lac-dye are manufactured at Dīgnagar.

Asansol Town.—Head-quarters of the subdivision of the same name in Burdwān District, Bengal, situated in 23° 41′ N. and 86° 59′ E.,

on the East Indian Railway, 132 miles from Calcutta. Population (1901), 14,906. Asansol is a rapidly growing town, being an important railway junction and one of the chief centres of the coal industry. A large number of European and Eurasian employés live here. It was constituted a municipality in 1896. The income and expenditure during the decade ending in 1901–2 averaged Rs. 14,000. In 1903–4 the income was Rs. 20,300, half of which was derived from a tax on houses and lands; and the expenditure was Rs. 20,400, including Rs. 9,000 spent on conservancy. The East Indian Railway Volunteers and the 'B' troop of the Chotā Nāgpur Mounted Rifles have their head-quarters at Asansol. A Roman Catholic mission maintains a church, a convent, and schools; and a Methodist Episcopal mission supports a leper asylum, an orphanage, and a girls' school. The town contains the usual public offices; the subsidiary jail has accommodation for 44 prisoners.

Asarūr.—Village in the Khāngāh Dogrān *tahsīl* of Gujrānwāla District, Punjab, situated in 31° 47′ N. and 73° 42′ E. It is identified by Cunningham with the ancient city of Tse-kie or Tāki, which was visited by Hiuen Tsiang in A.D. 630. The city was then one of great importance, and is said by the Chinese pilgrim to have been 3 miles in circuit, a measurement which agrees well enough with that of the ruins still existing. The antiquity claimed for the place is confirmed by the large size of the bricks, 18 by 10 by 3 inches, which are found all over the ruins, and by the great numbers of Indo-Scythian coins that are discovered after heavy rain. Its history therefore certainly reaches back to the beginning of the Christian era. The ruins consist of an extensive mound, 15,600 feet, or nearly 3 miles, in circuit. The highest point is in the north-west quarter, where the mound rises to 59 feet above the fields. This part, which Cunningham takes to have been the ancient palace, is 600 feet long and 400 feet broad, and quite regular in shape. It contains an old well, 21 feet in diameter, which has not been used for many years and is now dry. The place is completely surrounded by a line of large mounds about 25 feet in height, and 8,100 feet, or $1\frac{1}{2}$ miles, in circuit, which was evidently the stronghold or citadel of the place. The mounds are round and prominent, like the ruins of large towers or bastions. On the east and south sides of the citadel the mass of ruins sinks to 10 and 15 feet in height, but it is twice the size of the citadel, and is no doubt the remains of the old city. There are no visible traces of any ancient buildings, as all the surface bricks have been long ago carried off to the neighbouring shrine of Ugāh Shāh at Khāngāh Masrūr on the road from Lahore to Pindī Bhattiān; but among the old bricks forming the surrounding wall of the mosque, Cunningham found three moulded in different patterns, which could only have belonged to buildings of some importance. He

found also a wedge-shaped brick, 15 inches long and 3 inches thick, with a breadth of 10 inches at the narrow end and nearly 10½ inches at the broad end. This must have been made for a *stūpa*, or for a well, but most probably for the latter, as the existing well is 21 feet in diameter. The modern village of Asarūr contains only forty-five houses. At the time of Hiuen Tsiang's visit there were ten monasteries, but very few Buddhists, and the mass of the people worshipped the Brāhmanical gods. North-east of the town, at 10 *li*, or nearly 2 miles, was a *stūpa* of Asoka, 200 feet in height, which marked the spot where Buddha had halted, and which was said to contain a large number of his relics. This *stūpa* General Cunningham identifies with the little mound of Sālār, near Thatta Saiyidān, just 2 miles to the north of Asarūr.

Ashta.—Town in the Vālva *tāluka* of Sātāra District, Bombay, situated in 16° 57′ N. and 74° 25′ E., on the right bank of the river Kistna, and on the main road from Mirāj to Sātāra, 20 miles north-west of the former, and 61 miles south-east of the latter. Population (1901), 12,409. Ashta is an agricultural town, with a weekly market, and an annual fair held in June, when about 5,000 persons assemble. It has been a municipality since 1853. During the decade ending 1901 the income averaged Rs. 5,000. In 1903-4 the income was Rs. 3,200. The town contains an English school and a dispensary.

Ashta.—Village in the Mādha *tāluka* of Sholāpur District, Bombay, situated in 17° 51′ N. and 75° 28′ E. Population (1901), 936. The place is interesting as the scene of the battle of February 20, 1818, between General Lionel Smith and Bājī Rao Peshwā's troops, in which the Peshwā was defeated and his general Gokhale killed. It was entirely a cavalry action, Gokhale having 8,000 to 10,000 horse, and General Smith two regiments of cavalry, a squadron of the 22nd Dragoons, 1,200 auxiliary horse, and 2,500 infantry. The battle had the important result of freeing the Sātāra Rājā from Bājī Rao's power. Ashta has a large lake which, when full, has an area of more than 4 square miles and a capacity of 1,419,000,000 cubic feet of water. The lake has been formed at a cost of upwards of 7 lakhs by throwing across the Ashta stream, a feeder of the Bhīma, an earthen dam 12,709 feet long with a greatest height of 57·75 feet. Two canals are led from the dam; that on the left bank is 11½ miles long, discharging 30 cubic feet a second, and commanding 12,258 arable acres; while the right-bank canal is 10 miles long, discharging 10 cubic feet a second, and commanding 5,624 arable acres. Ashta contains two schools, one of which is for girls.

Ashta.—Head-quarters of the Nizāmat-i-Maghrib or western district of Bhopal State, Central India, situated in 23° 1′ N. and 76° 46′ E., on the east bank of the Pārbati. Population (1901), 5,534. The site

is traditionally said to be a very old one, but the present town was built in the fifteenth century. In Akbar's time it was the head-quarters of a *mahāl* in the Sārangpur *sarkār* of the *Sūbah* of Mālwā. The town is surrounded by a fortified wall, and contains a small fort built by Dost Muhammad Khān in 1716; both wall and fort are now in a dilapidated condition. In 1745 Ashta was seized by the Marāthās, but was restored to Bhopāl under the treaty of 1817. A mosque built in 1602 stands in the town. In 1837 Nawāb Jahāngīr Muhammad Khān was besieged in Ashta by the forces of Kudsia Begam. The chief industries are weaving, dyeing, and printing of cotton cloth. A considerable trade in opium is carried on here; and the town contains a primary school, a dispensary, British and State post offices, and an inspection bungalow.

Ashtagrām ('the eight townships').—The country on both banks of the Cauvery near Seringapatam, Mysore State, bestowed by the Hoysala king Vishnuvardhana, early in the twelfth century, on the Vaishnava reformer Rāmānuja, by whom he had been converted from the Jain faith. The reformer appointed Brāhmans to administer the tract, under the designation of Hebbārs and Prabhus, settling them in eight towns. The chiefs of Nāgamangala, probably descended from these, were put down at the end of the fifteenth century by the Vijayanagar king Narasinga, who took possession of Seringapatam. Under the Mysore kings the tract was formed into the Patna Ashtagrām and Maisūr Ashtagrām *tāluks*, the former to the north of the river and the latter to the south. In 1863 Mysore and Hassan Districts were constituted the Ashtagrām Division, which was abolished in 1880.

Ashtami.—Village included within the municipal limits of ROHA TOWN, Kolāba District, Bombay.

Ashtī.—Town in the Arvī *tahsīl* of Wardhā District, Central Provinces, situated in 21° 12′ N. and 78° 11′ E., 39 miles from Pulgaon station. Population (1901), 5,237. Ashtī was the seat of government of part of Wardhā and Berār under the Mughal empire, and two handsome mausoleums built over the graves of Afghān nobles who administered these territories during the reign of Jahāngīr are still standing. A cotton-ginning and pressing factory was erected in 1894. Ashtī possesses an English middle school, and a town fund is raised for purposes of sanitation.

Ashti.—South-western *tāluk* of Bhīr District, Hyderābād State, with an area of 614 square miles. The population in 1901, including *jāgīrs*, was 54,181, compared with 70,059 in 1891, the decrease being due to the famines of 1897 and 1899–1900. The *tāluk* contains 127 villages, of which five are *jāgīr*, and Ashti (population, 4,019) is the head-quarters. The land revenue in 1901 was 1·9 lakhs. The *tāluk* adjoins the Ahmadnagar District of Bombay.

Asīnd.—Principal town of an estate of the same name in the north of the State of Udaipur, Rājputāna, situated in 25° 44′ N. and 74° 19′ E., on the left bank of the Khāri river, a tributary of the Banās, about 90 miles north-east of Udaipur city. Population (1901), 2,237. The estate, which is held by one of the first-class nobles of Mewār, who is styled Rāwat, consists of 72 villages. The income is about Rs. 80,000, and a tribute of about Rs. 1,040 is paid to the Darbār. The Rāwat of Asīnd belongs to the Chondāwat family of the Sesodia clan of Rājputs; and the founder of this particular house, Thākur Ajīt Singh, signed, on behalf of the Mahārānā, the treaty of 1818 with the British Government.

Asīrgarh.—Hill fort in the Burhānpur *tahsīl* of Nimār District, Central Provinces, situated in 21° 28′ N. and 76° 18′ E., 29 miles from Khandwā, and 7 miles from Chāndni station on the Great Indian Peninsula Railway. The fort was held until recently by a small detachment of native infantry from Mhow, but this was removed in 1904. It is situated on an outlying spur of the Sātpurā range, 850 feet high from the base and 2,283 above sea-level, and formerly commanded the main road from Hindustān to the Deccan. The area of the fort crowning the hill is about 60 acres, and except in two places it is surrounded by a sheer scarp 80 to 120 feet in depth. The two points of access are defended by ramparts, through one of which a narrow ascent of stone steps passes through five gateways to the fort. An outer line of works, called the lower fort, embraces an inferior branch of the hill immediately above the village. A sally-port has been constructed through the underlying rock at the south-eastern corner. In the foundations of the fort are many vaulted chambers, probably old granaries. Firishta derived the name of Asīrgarh from Asā Ahīr, to whom he attributes the foundation of the fort; but this is probably incorrect, as the name Asīr is repeatedly mentioned by the Rājput poet Chānd. It may come from the Asi or Haihaya kings who ruled the Narbadā valley from Maheswāra. In 1295 Asīrgarh was a stronghold of the Chauhān Rājputs, and was stormed by Alā-ud-dīn Khiljī on his return from raiding the Deccan, the whole garrison being put to the sword except one boy. It was subsequently held by the last of the Fārūki kings of Khāndesh, and taken by Akbar after a long siege in 1600. An inscription cut in the rock records this event. The main gateway was built in the reign of Jahāngīr, and the mosque (subsequently used as a barrack) in the reign of Shāh Jahān. A great bronze gun which was cast at Burhānpur in 1665 formerly stood on the western bastion, but has recently been removed to Government House, Nāgpur. In 1803 Asīrgarh was held by the Marāthās, and was taken by a detachment of General Wellesley's army shortly after the battle of Assaye, but was restored on the conclusion of peace. It was again besieged by

a British force in 1819, and taken after a siege of twenty days, during which there was a considerable amount of fighting, and the British lost a hundred native soldiers by an accidental explosion in a battery.

Asīwan.—Town in the Mohān *tahsīl* of Unao District, United Provinces, situated in 26° 48′ N. and 80° 28′ E., on the bank of a fine lake 20 miles north of Unao town. Population (1901), 6,153. It is said to have been founded in the eleventh century by a *dhobi* or washerman, named Asun, but has no history. Asīwan contains a number of mosques and temples, and a fine masonry *sarai* built early in the nineteenth century. There is a small manufacture of coarse cotton cloth, and a market is held twice a week. A school has about 98 pupils.

Aska Tahsīl.—*Zamīndāri tahsīl* in the interior of Ganjām District, Madras, lying between 19° 15′ and 19° 45′ N. and 84° 18′ and 84° 45′ E., with an area of 407 square miles. It consists of the *zamīndāris* of Dhārākota, Serugada, and Chinnakimedi, and the proprietary estates of Aska, Kurla, and Devabhūmi. The population in 1901 was 115,883, compared with 108,920 in 1891. They live in 368 villages. The demand for land revenue and cesses in 1903–4 was Rs. 1,25,000. The land is fertile and well irrigated by the RUSHIKULYA Project and other sources. Rice is widely cultivated, and sugar-cane is extensively grown and made into sugar in a factory at ASKA, the head-quarters.

Aska Village.—Head-quarters of the *tahsīl* of the same name in Ganjām District, Madras, situated in 19° 36′ N. and 84° 40′ E., midway on the road from Berhampur to Russellkonda, immediately above the confluence of the Rushikulya and Mahānadī rivers. Population (1901), 4,031. It is chiefly known for its sugar factory and distillery, which belong to Mr. F. J. V. Minchin, and in 1903 employed an average of 393 hands daily. The principal feature of its operations is the extraction of sugar direct from the cane by the diffusion process. This is worked by a battery imported from Austria, and it is stated that 25 per cent. more sugar can thus be extracted than by powerful cane mills driven by steam. In 1903 the out-turn of sugar was valued at Rs. 1,71,000, and that of spirit at Rs. 79,000. The sugar is chiefly disposed of in the Berhampur market, and the spirit is supplied to the excise tracts of the District under a monopoly contract with the Government. The season for sugar manufacture is from January to the end of March. Besides country spirit, other alcoholic liquors are manufactured in the works and also aerated waters. Aska is the head-quarters of a District Munsif and the residence of the proprietors of the Aska, Kurla, and Devabhūmi estates. It possesses a town hall, the gift of Mr. Minchin, and a fine native *chattram* (resthouse) constructed from public subscriptions. A park is being laid out to commemorate the coronation of His Majesty the present King-Emperor.

Askot.—Estate in Almorā District, United Provinces, situated along the Kālī river, comprising 142 villages with an area of 400 square miles. The land revenue payable to Government is Rs. 1,450, and the cesses amount to Rs. 232, while the rent-roll is about Rs. 4,200. The estate belongs to a Surajbansī Rājput, claiming descent from a younger branch of the Katyūrī Rājās who once ruled Kumaun, and the head of the family bears the title of Rajwār. The Rajwārs of Askot were conquered by the Chands, but were left in possession of their estate on payment of tribute. In 1845 the estate was settled with the village occupants as a *zamīndāri* in the plains; but subsequently the whole estate was settled with the Rajwār, who may now extend cultivation to his own profit, but cannot interfere with the possessions of the permanent tenants, as recorded in the village papers.

Assam[1].—The Province of Assam, which lies on the north-eastern border of Bengal, and is one of the frontier Provinces of the Indian Empire, is situated between 22° 19′ and 28° 16′ N. and 89° 42′ and 97° 12′ E. It is bounded on the north by the eastern section of the great Himālayan range, the frontier tribes from west to east being successively the Bhotiās of Bhutān, the Bhotiās of Towang—a province subject to Lhāsa—Akās, Daflās, Mīris, Abors, and Mishmis; on the north-east by the Mishmi Hills, which sweep round the head of the Brahmaputra Valley; on the east by the mountains which are inhabited by Khamtis, Singphos, and various Nāgā tribes, and by the Burmese frontier where it marches with that of the State of Manipur; on the south by the Chin Hills, the Chittagong Hill Tracts, and the State of Hill Tippera; and on the west by the Bengal Districts of Tippera, Mymensingh, and Rangpur, the State of Cooch Behār, and Jalpaigurī District. The total area of the Province, including the Native State of Manipur (8,456 square miles), is 61,682 square miles.

The name 'Assam' is, according to some, derived from the Sanskrit *asama*, which means 'peerless' or 'unequalled.' It has been suggested that this title was applied to the Shan invaders, now called Ahoms, and was transferred from them to the country that they conquered. This derivation is, however, open to the serious objection that in Assamese *s* is softened into *h*, as in the name of the tribe; and there is no apparent reason why it should have been retained in the name of the country.

[1] Since the following article was written the small Province of Assam has ceased to exist as a separate unit, and has been amalgamated with fifteen Districts of Northern and Eastern Bengal to form the larger Province of Eastern Bengal and Assam, which is ruled by a Lieutenant-Governor, with a Legislative Council. The account of the general administrative staff, the various departments, and the system of legislation is thus obsolete; and the arrangements which are now in force will be found described in the article on EASTERN BENGAL AND ASSAM. The remainder of the article affords a generally correct account of that portion of the new Province which was once known as Assam.

It is doubtful also whether either the Ahoms themselves, or the tribes they found in occupation of the country, would use a Sanskrit term to denote the dominant race.

Physical aspects.

The Province falls into three natural divisions: the valley of the Surmā or Barāk, the valley of the Brahmaputra or Assam proper, and the intervening range of hills. The Native State of Manipur, which lies east of Cāchār, is under the control of the Local Administration, and the hills to the south of that District inhabited by the Lushais have recently been brought under British rule.

The Surmā Valley is a flat plain about 125 miles long by 60 wide, shut in on three sides by ranges of hills. The river from which the valley takes its name rises on the southern slopes of the mountain ranges on the borders of the Nāgā Hills District, and flows south through the Manipur hills. At Tipaimukh, it turns sharply to the north and takes a tortuous course, with a generally westward direction, through Cāchār District. On the western boundary of Cāchār it divides into two branches, the northern of which, known as the SURMĀ, flows near the Khāsi Hills past Sylhet and Chhātak, till it turns south at Sunāmganj. The southern branch, called at first the Kusiyārā, again divides into two streams, known as the Barāk and the Bibiyānā, or Kālni, but both branches rejoin the Surmā on the western boundary of the Province. The chief tributaries of the river on the north, after it enters British territory, are the JIRI and JĀTINGĀ from the North Cāchār Hills, and the BOGAPĀNI and JĀDUKĀTA from the Khāsi and Jaintiā Hills. On the south it receives from the Lushai Hills the SONAI, the DHALESWARI with its second channel the Kātākhāl, and the SINGLĀ; and the LANGAI, MANU, and KHOWAI from Hill Tippera.

The western end of the valley lies very low, and at Sylhet the low-water level of the Surmā is only 22·7 feet above the sea. The banks of the rivers are raised by deposits of silt above the level of the surrounding country, and are lined with villages, which in the rainy season appear to be standing in a huge lake. Farther east the country rises, and fields covered with *sail* (transplanted winter rice) take the place of swamps, in which only the longest-stemmed varieties of paddy can be grown; but even here there are numerous depressions, or *haors* as they are called, in the lowest parts of which water remains during the dry season, and which can be used only for grazing or the growth of winter crops. In western Sylhet the houses of the villagers are crowded together, gardens and fruit trees are scarce, and the scenery at all seasons of the year is tame and uninteresting. Cāchār and the eastern portion of Sylhet have, on the other hand, much to please the eye. Blue hills bound the view on almost every side, the villages are buried in groves of slender palms, feathery bamboos, and broad-leaved plan-

tains, and even in the dry season the country looks fresh and green. The level of the plain is broken by low ranges and isolated hills, and here and there beds of reeds and marshes lend variety to the scene. Little or no forest exists in Sylhet, but there are extensive Reserves in the south and east of Cāchār District.

The Brahmaputra Valley is an alluvial plain about 450 miles in length, with an average breadth of about 50 miles, shut in, like the Surmā Valley, by hills on every side except the west. In its lower portion it lies almost east and west, but in its upper half it trends somewhat towards the north-east. The BRAHMAPUTRA flows through the centre of this plain, and receives in its course the drainage of the Himālayas on the north, and the Assam Range on the south. The principal tributaries on the north bank are the DIBĀNG, DIHĀNG, SUBANSIRĪ, BHARELI, DHANSIRI, BARNADĪ, MANĀS with its tributary the AI, the CHĀMPĀMATI, SARALBHĀNGA, and SANKOSH; on the south, the greater affluents are the NOA, BURI DIHING, DISĀNG, DIKHO, JHĀNZI, and another DHANSIRI. A short distance below the junction with this Dhansiri a considerable body of water separates itself from the Brahmaputra, and, under the name of the KALANG, flows with a tortuous course through Nowgong District, rejoining the main stream about 10 miles above Gauhāti. The KALANG receives the KAPILI, which brings to it a large part of the drainage of the Mīkīr, the North Cāchār, and the Jaintiā Hills, and the DIGRU from the Khāsi Hills. Below Gauhāti the most considerable affluents on the south bank are the KULSI and JINJIRĀM.

The valley, as a whole, is a plain of fairly uniform breadth, except in the centre, where the Mīkīr Hills project from the main mass of the Assam Range, almost up to the southern bank of the Brahmaputra. Between Tezpur and Dhubri there are outcrops of gneissic rock above the alluvium, even on the north bank of the river, and the central portion of Goālpāra District is much broken by ranges of low hills; but elsewhere there is little to interrupt the even level of the plain.

The Brahmaputra, through the greater part of its course, is bounded on either side by stretches of marsh land covered with thick grass jungle, interspersed here and there with patches of mustard and summer rice. Farther inland the level rises, and there is a belt, usually of considerable breadth, of permanent cultivation. The plain is covered with rice-fields and dotted over with clumps of bamboos, palms, and fruit trees, in which are buried the houses of the cultivators. In most parts of the valley this belt supports a fairly dense population; but near the hills cultivation again falls off, and grassy plains and forests stretch to their feet. Even here, however, rice is grown on fields irrigated from the hill streams, and European enterprise has in many places felled the forests and opened prosperous tea gardens. Little of this is seen by the

traveller on the river steamer, and he is apt to receive the impression that Assam is a wilderness of impenetrable jungle, the home of nothing but wild beasts. This view is but partially correct. There are still large areas of waste land, swamps, forests, and hills; but in parts of the valley the population is beginning to press upon the soil, and little good land remains available for settlement. Few places in the Brahma putra Valley would not appeal to a lover of the picturesque. On a clear day the view to both the north and south is bounded by hills, while behind the lower ranges of the Himālayas snowy peaks glisten in the sun. The rice-fields are interspersed with groves of feathery bamboos, on every side are pools, rivers, and woods, and in the wilder parts nature is seen freed from the restraining hand of man. The slopes of the lower hills are clothed with forest, and the rivers that debouch upon the plain issue through gorges of exceptional beauty.

The range of mountains which separates these two valleys projects at right angles from the Burmese system, and lies almost due east and west. At its western end it attains a height of more than 4,600 feet in the peak of Nokrek, above the station of Turā. The hills are here broken up into sharply-serrated ridges and deep valleys, all alike covered with forest. Farther east, in the Shillong peak, they reach a height of 6,450 feet; but this is only the highest point in a table-land hardly any part of which falls much below 6,000 feet. The denser forest growth has here disappeared, and there are wide stretches of rolling down, dotted with clumps of oak and pine. On their southern face the hills rise like a level wall abruptly from the plain, with occasionally a deep ravine, which the rivers, fed by the heavy rainfall of that region, have cut through the plateau. Towards the Jaintiā and North Cāchār Hills the level falls; but the BARAIL Range, which commences on the south-east margin of the Khāsi-Jaintiā plateau, rises by sudden leaps to a considerable height, and among the hills bordering the Jātingā valley summits of from 5,000 to 6,000 feet are found. Farther east, the highest point in the Province is reached in JĀPVO, on the border of the Nāgā Hills District. The hills here are all of the serrated type, and their sides are clothed with forest or, on the sites of fallowing *jhūms*[1], with dense bamboo or grass jungle. The Lushai Hills, which divide Burma from Assam, run at right angles to the Assam Range in parallel ridges. They are for the most part covered with bamboo jungle and rank undergrowth, but in the eastern portion open grass-covered slopes are found, with groves of oak and pine, interspersed with rhododendron. The State of Manipur consists of a fertile valley, covering an area of about 650 square miles, surrounded by ranges of hills.

Numerous swamps and *jhīls* are found in both valleys, and during the rains the western portion of Sylhet lies under water; but in British

[1] A *jhūm* is a piece of land which has been cleared and cultivated for two or three seasons and then allowed a rest for several years, see p. 55.

territory there are no lakes of any considerable importance during the dry season. In Manipur the LOKTAK, a sheet of water covering about 27 square miles, lies to the south of Imphal, the capital town. The only island of any size is the MĀJULI, a tract of land covering 485 square miles in Sibsāgar District, which is surrounded by the waters of the Brahmaputra and the Subansirī.

The Surmā Valley is an alluvial tract, in which the process of deltaic formation has not proceeded so rapidly as in the rest of the Gangetic plain. Disastrous floods were more common at the end of the eighteenth century than they are at the present day, and it seems possible that the general level may have been appreciably raised within the last hundred years, by the silting up of depressions and the sediment deposited by the rivers in their annual inundations. Low ranges of hills, which for the most part consist of Upper Tertiary sandstones, project into the valley from the south; and its surface is dotted with isolated hills called *tīlas*, from 50 to 200 feet high, composed of layers of sand, clay, and gravel, often highly indurated with ferruginous cement. In the centre of the Assam Valley the soil consists of a light layer of clay superimposed upon beds of sand. Farther back from the Brahmaputra the alluvium is more consolidated, and here and there are to be found the remains of an older alluvium of a closer and heavier texture, which corresponds to the high land of the Gangetic plain. Outliers of gneissic rock from the Assam Range are common between Goālpāra and Gauhāti, and are found as far east as Tezpur.

[1] The basis of the Assam Range is a gneissic rock. At its western end sandstones and conglomerates, which are referable to the Cretaceous system, are superimposed upon the gneiss, and are themselves overlaid by limestone and sandstone of the Nummulitic age. Farther eastwards what is known as the Shillong plateau rises steeply from the Surmā Valley, but on its northern face falls away in a series of low hills towards the Brahmaputra. The gneiss is here succeeded by the Shillong or transition series, which consists of quartzites, conglomerates, phyllites, and schists, through which appear granite and dioritic rocks. Upon this series have been superimposed sandstones and conglomerates of the Cretaceous age, which contain occasional coal seams, and which are in their turn overlaid by beds of the Nummulitic or Lower Tertiary period, consisting of limestone and sandstone with interstratified shales and coal deposits. Along the southern edge of the plateau in the neighbourhood of Cherrapunji, a group of bedded basaltic rocks, known as the Sylhet trap, has been forced up between the Cretaceous and the older formations. The Mymensingh border is

[1] This section has been compiled from notes furnished by Mr. P. N. Bose, of the Geological Survey of India, and from an account of Assam by Sir Charles Lyall, published in the *General Administration Report* of the Province for 1882-3.

fringed by low ranges of hills of Upper Tertiary formation; and though this series has been almost entirely removed by denudation below the southern scarp of the Khāsi Hills, they appear again east of Jaintiāpur, and their soft, massive, greenish sandstones rise rapidly from this point into the Barail range. This range appears to have thrust the Nummulitic and older formations in a north-easterly direction; but west of Cāchār it curves to the north-east, and finally merges into the Burmese mountain system, of which it forms a part. Little is known of the eastern extremity of the Assam Range; but it appears that the Upper Tertiary sandstones are succeeded by a series of hard sandstones, slates, and shales with quartzose beds, while still farther east serpentine dikes, identical in composition with those of Burma, run north and south. Upper Tertiary rocks are believed to constitute the Pātkai range, and are found again capping the hills which look down upon the Chindwin valley, but between these two points there intervenes a belt of pre-Tertiary beds about 100 miles in width. The hills containing the coal measures of Sibsāgar and Lakhimpur consist of an enormous thickness of sandstones, the upper series of which are topped with conglomerates and clay. The Himālayas north of the Brahmaputra have never been properly explored, but there is reason to suppose that they are composed of great thicknesses of soft massive sandstones, of Tertiary age and fresh-water origin. The economic aspect of the geology of the Province is referred to in the section on Mines and Minerals.

The uncultivated portions of the Assam Valley are usually covered with forest, or with grass and reeds which are sometimes nearly 20 feet in height. The three commonest varieties are *ikra* (*Saccharum arundinaceum*), *nal* (*Phragmites Roxburghii*), and *khagari* (*Saccharum spontaneum*). At the western end the prevalent tree is *sāl* (*Shorea robusta*); but farther east the forests are evergreen, the chief constituents being species of *Amoora*, *Michelia*, *Magnolia*, *Stereospermum*, *Quercus*, *Castanopsis*, *Ficus*, and *Mesua*. Various kinds of palms, canes, tree-ferns, bamboos, and plantain-trees are common. The vegetation of Sylhet and Cāchār does not differ materially from that of Eastern Bengal. There is comparatively little forest, but in the swampy parts numerous species of reeds and aquatic plants are found. The greater part of the Assam Range is covered with dense tree forest or bamboo jungle, but the Khāsi plateau is a fine succession of rolling downs dotted with groves of oak and pine. The flora of this tract is extremely rich, and upwards of 2,000 flowering plants were collected by Dr. Hooker within ten miles of Cherrapunji, while various kinds of orchids and balsams, rhododendrons, azaleas, and wild roses are found on every side. The Nāgā and Manipur Hills have a flora in many respects similar to that of the Khāsi Hills, but in addition possess a distinct Sikkim element, while the Lushai Hills are botanically part of the Burmese system.

The most noteworthy wild animals are elephants, rhinoceros, tigers, leopards, bears, wild dogs, wild hog, deer, buffaloes, and bison (*Bos gaurus*). The *mithan* or *gayāl* (*Bos frontalis*) has been domesticated by the wild tribes, but it is doubtful whether it is now found in Assam in a wild state. Rhinoceros are of three kinds: the large variety (*unicornis*), which lives in the swamps that fringe the Brahmaputra; the smaller variety (*sondaicus*), which is occasionally met with in the same locality; and the small two-horned rhinoceros (*sumatrensis*), which is now and again seen in the hills south of the Surmā Valley, though its ordinary habitat is Sumatra, Borneo, and the Malay Peninsula. The ordinary varieties of deer found in the Province are the *sāmbar* (*Cervus unicolor*), the *bārasingha* or swamp deer (*Cervus duvauceli*), the hog deer (*Cervus porcinus*), and the barking-deer (*Cervus muntjac*). Goat-antelopes (*Nemorhaedus bubalinus* and *Cemas goral*) are occasionally met with on the higher hills, but are scarce and shy. Elephants are found in considerable numbers in the Assam Valley and in the lower slopes of the Assam Range. They are also occasionally hunted with success in South Cāchār and in South-eastern Sylhet. Extensive operations have been undertaken by the Government Khedda department; and *mahāls*, or the right of hunting within certain areas not reserved for that department, are leased by auction sale to the highest bidder, who pays a royalty of Rs. 100 on each animal captured. During the period when the Government *kheddas* were working in the Gāro Hills about 400 elephants were annually captured in the Province. Small game include florican, partridges, pheasants, pea- and jungle-fowl, wild geese and ducks, snipe, and hares. Excellent mahseer fishing is also obtained in some of the rivers.

The climate of Assam is characterized by coolness and extreme humidity, the natural result of the great water surface and extensive forests over which evaporation and condensation proceed, and the close proximity of the hill ranges, on which an excessive precipitation takes place. Its most distinguishing feature is the copious rainfall between March and May, at a time when precipitation over Upper India is at its minimum. The year is thus roughly divided into two seasons, the cold season and the rains, the hot season of the rest of India being completely absent. From the beginning of November till the end of February the climate is cool and extremely pleasant, and at no period of the year is the heat excessive. Table I, appended to this article, shows the mean temperature and diurnal range in January, May, July, and November at Silchar, Sibsāgar, and Dhubri, the only stations in the Province at which observations have been systematically recorded for any considerable period. Except in the height of the rains, the mean temperature is appreciably lower at Sibsāgar than at Dhubri.

This is partly due to the heavy fogs, which in the cold season frequently hang over the upper part of the Brahmaputra Valley till a late hour of the day, and prevent the country from being warmed by the rays of the sun. In the Surmā Valley the thermometer in the winter is from five to six degrees higher than in Upper Assam, but during the remainder of the year the climate of Sylhet is fairly cool. Cāchār has a higher mean temperature for the year than any other District in the Province. On the Shillong plateau the thermometer seldom rises above 80° in the shade at the hottest season of the year, and ice forms on shallow pools in the winter nights. Fogs occur in the Surmā Valley, but not so commonly as in Central and Upper Assam, where at certain seasons of the year they are a serious impediment to steamer traffic. In the Surmā Valley the prevailing wind is from the south-west, except in the months of April and May, when it has a north-north-east direction. In the Brahmaputra Valley the wind is usually from the north-east. During July and August the wind blows from the south-west in Assam proper and from the south-east in Goālpāra District.

The total amount of rain that falls in Assam during the year is always abundant, but is sometimes unfavourably distributed. In the Surmā Valley, the average rainfall is 157 inches at Sylhet, and 124 at Silchar. To the south of the valley precipitation is less pronounced, but deluges of rain fall on the southern slopes of the Khāsi Hills, and pour down into the valley. The annual rainfall at CHERRAPUNJI averages 458 inches, and 905 inches are said to have fallen in 1861, of which 503 inches were recorded in the months of June and July. Goālpāra and Lakhimpur, at the two ends of the Assam Valley, receive about 115 inches of rain during the year. Kāmrūp, Nowgong, and Darrang are to some extent protected by the high plateaux of the Khāsi Hills, and the rainfall of these Districts ranges from 71 to 77 inches. At Lankā, in the Kapili valley in Nowgong, the average fall is less than 43 inches; but a little to the east the level of the hills that separate the Brahmaputra and Surmā Valleys drops, and the rainfall in Sibsāgar rises to 85 inches. The percentage of variability on the average annual fall is 70 in the Surmā and 68 in the Assam Valley. The rainfall in the Hill Districts is ample; but at the few stations at which observations have been recorded its character is largely determined by local conditions, and the average rainfall of this region is probably larger than the figures would suggest. Statistics of monthly rainfall are shown in Table II, appended to this article.

Storms often occur in the spring months, generally accompanied by high winds and heavy local rainfall, but seldom take the form of destructive cyclones. Two such, however, visited the country at the foot of the Gāro Hills in 1900, destroying everything in their path, and

killing forty-four people. The Province has always suffered more from floods than from a failure of the water-supply. The rainfall, which is everywhere heavy, is in places enormous, and the rivers are frequently unable to carry off the torrents of water suddenly precipitated on their catchment areas. In Mughal times the country in the neighbourhood of the upper portion of the Barāk was protected by an embankment; but at the western end of the Surmā Valley it has always been impossible to restrain the torrential floods, and the whole surface of the plain goes under water. In 1781 a sudden rise of the rivers wrought such utter desolation that, in spite of the efforts of Government, nearly one-third of the population died of famine; but, though inundations annually occur, no such calamities have been known in recent years. In the Assam Valley floods were always one of the chief obstacles to the Muhammadan invaders; and the rivers in Sibsāgar, where there was a large Ahom population, were protected by strong embankments. With the disappearance of the native system of compulsory labour, these works were allowed to fall into disrepair, but steps have recently been taken for the restoration of the more important among them. Except in a few places, where the high bank comes down to the water's edge, the floods of the Brahmaputra render a broad belt of land on either side of the river unfit for ordinary cultivation in the rains, and a considerable amount of local damage is sometimes done by the spill water of its tributaries. The earthquake of 1897 in some way affected the drainage channels and levels of the country, and since that date the floods, especially in Lower Assam, have been of greater duration and intensity. Large tracts, which used formerly to bear rich crops of mustard, now remain too long under water to admit of seed being sown; and special works have been rendered necessary for the protection of GOĀLPĀRA and BARPETĀ, as after the earthquake these towns were found to be below flood-level. The condition of Barpetā in particular has been much improved by drainage works, in which the people co-operated without payment.

Assam has always been subject to earthquakes. In A.D. 1607 hills are said to have been rent asunder and swallowed up; and M'Cosh, writing in 1837, reports that, some twenty years before, a village standing on a knoll near Goālpāra completely disappeared, a pool of water appearing in its place. Severe shocks were felt at Silchar in 1869 and 1882, and in 1875 some damage was done to houses in Shillong and Gauhāti. All previous seismic disturbances were, however, completely eclipsed by the earthquake of June 12, 1897, which was the most severe and disastrous of which there is any record in Assam. The station of Shillong was levelled with the ground; and women and children were for several days exposed to drenching rain, with no better shelter than could be obtained from a few tents, tumbledown stables, and sheds

without floors or walls. Nearly all masonry buildings in Gauhāti and Sylhet were completely wrecked, and much damage was done in Goālpāra, Nowgong, and Darrang. Two Europeans and 1,540 natives lost their lives, the majority of the latter being killed by landslips in the hills and by the falling in of river banks in Sylhet. Roads and bridges were destroyed, and the drainage of the country was seriously affected by the silting-up of streams and watercourses. The total cost incurred on special repairs to public works neccessitated by the earthquake exceeded 37 lakhs, but, even with this sum, it was impossible to restore them to their former condition. Of the damage done to private property it is difficult to form an estimate.

History.

The early history of the Province is very obscure. In the two great river valleys, especially in that of the Surmā, the population contains a certain admixture of Dravidian blood; but, in the main, Assam has drawn its inhabitants from the vast hive of the Mongolian race in Western China, which in very ancient times threw off a series of swarms that afterwards found their way into the frontier lands of India—some to the west, ascending the Tsan-po or upper course of the Brahmaputra, and so along the northern slopes of the Himālayas; some to the south, down the courses of the Chindwin, Irrawaddy, Salween, Menam, and Mekong rivers, peopling Burma, Siam, and the adjoining countries; and some to the south-west, descending the Brahmaputra to Assam and thence far into Bengal. It is with these last that we are here concerned. Their main line of movement was probably along the banks of the Brahmaputra; and as each swarm was forced to yield to the pressure from behind, it either moved on westwards or turned aside into the hills of the Assam Range.

The first mention of the country which we now call Assam is found in the epics and religious legends of Gangetic India, but it is not yet possible to unravel the slender thread of real fact from the tangled skein of fable, invention, and poetical exaggeration. Aryan priests and warriors undoubtedly found their way thither in very early times, but they were wanting in the historical instinct, and have left no trustworthy record behind them. Various places mentioned in the story of Krishna and in the Mahābhārata are now identified with sites in the Province; but many of them are also claimed, probably with better reason, by other parts of India. Among much that is vague or dubious one fact stands out clearly. There is no doubt that the temple of Sakti, Siva's consort, at Kāmākhya near Gauhāti, was famous in very ancient times, and that it was a great centre of the bloody and sensual form of worship inculcated in the Tantras, which probably had its origin there. The Kālikā Purāna and Jogini Tantra preserve the names of several kings, whose titles, Dāvana and Asura, betray their aboriginal descent, and

who were followed by Naraka, the reputed founder of the ancient and famous city of Prāgjyotishapura, the modern Gauhāti. According to tradition, Naraka ruled from the Karatoyā river to the extreme east of the Brahmaputra Valley, and met his death at the hands of Krishna. He was succeeded by his son Bhagadatta, whose name finds frequent mention in the Mahābhārata as the Lord of Prāgjyotisha and the powerful ally of Duryodhana: he had, it is narrated, a great army of Chīnas and Kirātas, but was defeated and slain by Arjuna on the fatal field of Kurukshetra.

Reliable history is first reached in the narrative of the Chinese pilgrim Hiuen Tsiang, who visited the country then known as Kāmarūpa, about A. D. 640, and found it occupied by a race with a dark yellow complexion, small in stature and fierce in appearance, but upright and studious. Their king was Kumāra Bhāskara Varman [1], and they followed the Brāhmanical religion.

Of the next few centuries our knowledge is very slight; but the gloom is to some extent dispelled by the recent discovery of several inscribed copperplates [2], which appear to have been prepared between the latter part of the tenth and the middle of the twelfth century. The primary object of these inscriptions was to recite the grant of land to Brāhmans; but to us their most interesting part is the preamble, wherein some account is given of the chief by whom each grant was made and of his ancestry. It would seem that, soon after Hiuen Tsiang's departure, the country fell into the hands of a line of aboriginal chiefs who were subsequently converted to Hinduism. Then followed a dynasty founded by one Pralambha, who killed or banished all the members of the previous ruling family. The sixth in descent from him was Bala Varman, in whose reign the first of the copperplate documents above referred to was executed. These kings were worshippers of Siva; their capital was at a place called Hārūppeswara, but they still called themselves Lords of Prāgjyotisha. Early in the eleventh century they were succeeded by a fresh line of kings, who, like their predecessors, claimed descent from the mythical Naraka. The third prince of this family was Ratnapāla, 'the mighty crusher of his enemies, who studded the earth with whitewashed temples and the skies with the smoke of his burnt offerings.' He got much wealth from his copper mines (in Bhutān?); and he erected, it is alleged, pillar monuments of his victories, and built a new capital, which became the home of many wealthy merchants, learned men, priests, and poets. Some time later

[1] Varman is a Kshattriya title, but it is often assumed by aristocratic converts to Hinduism.

[2] Dr. Hoernle's readings of some of these plates, which were obtained by Mr. E. A. Gait and sent to him for decipherment, will be found in the *Journal of the Asiatic Society of Bengal* for 1897.

the country seems to have been conquered, first by the Sen kings of Bengal, and then by their rivals, the well-known Pāl dynasty, whose vassal, Tishya Deva, rebelled about 1133 and was defeated by the Pāl general Vaidyadeva, who in his turn seems to have made himself practically independent. The area ruled by these different kings varied greatly from time to time. Sometimes it stretched as far west as the Karatoyā river and, if their panegyrists can be believed, as far south as the sea-coast, including within its limits the Surmā Valley, Eastern Bengal, and, occasionally, Bhutān; at other times, it did not even comprise the whole of what is now known as the Brahmaputra Valley; sometimes again, and perhaps this was the more usual condition, the country was split up into a number of petty principalities each under its own chief. The Surmā Valley, at any rate, was usually independent of the kings of Kāmarūpa. The early history of this tract is even more obscure than that of the Brahmaputra Valley. We know, however, from copperplate inscriptions that in the first half of the thirteenth century it was ruled by a king named Govinda Deva, and subsequently by his son Isāna Deva; but we possess little information regarding them beyond the fact that they were Hindus.

According to the traditions of the Mahāpurushias, Lower Assam and the adjacent part of Bengal subsequently formed a kingdom called Kāmata, and its ruler at the beginning of the fourteenth century was named Durlabh Nārāyan. In the fifteenth century a line of Khen kings rose to power in the same tract of the country. The third and last of this line, Nilāmbar, was overthrown in 1498 by Husain Shāh, the Muhammadan king of Bengal, who, after a long siege, took the capital, Kāmatapur, by a stratagem.

A few years later later Biswa Singh laid the foundation of the Koch kingdom, and, after defeating the local chiefs, built himself a capital in Cooch Behār. The Koch tribe, though now in parts much intermixed with Dravidian stock, was probably at that time purely Mongolian and spoke a language closely allied to those of the Kachāris, Tipperas, Lalungs, Chutiyās, and Gāros. Biswa Singh was succeeded by his son Nar Nārāyan, who extended his kingdom in all directions. He defeated, among others, the chiefs of Dimaruā, Jaintiā, Khairam, Cāchār, and Tippera, and also the Ahom Rājā, whose capital he occupied until pacified by presents, hostages, and a promise of tribute. He met his match, however, in Isa Khān, the Muhammadan chief or Bhuiya of Sonārgaon in Eastern Bengal, who defeated his army and took prisoner his brother Sukladhwaj, to whose military genius he had been mainly indebted for his successes elsewhere. In 1581 the latter's son, Raghu, having rebelled, was given the country east of the Sankosh, Nar Nārāyan retaining for himself the portion west of that river, where he was succeeded, on his death in 1584, by his son Lakshmī Nārāyan.

This dismemberment of the kingdom quickly led to its dissolution, but we must first deal with the state of things in other parts of the Brahmaputra Valley.

Early in the thirteenth century an event occurred at the eastern extremity of the valley which was destined to change the whole course of Assam history. This was the invasion of the Ahoms, a Shan tribe from the ancient kingdom of Mungmau or Pong, which was situated in the upper portion of the Irrawaddy valley[1]. A quarrel as to the right of succession to the throne is said to have been the cause of the secession of Sukapha, one of the rival claimants, who, after wandering about the country between the Irrawaddy and the Pātkai mountains for some years, crossed the range in 1228 with a small following and entered the tract which now forms the southern part of Lakhimpur District and the south-east of Sibsāgar. It was at that time inhabited by petty tribes of Bodo affinities (Morans and Borahis), who were easily subdued: the country round Sadiyā, the northern part of the headquarters subdivision of Lakhimpur and the north-eastern part of Sibsāgar as far as the Disāng river, which had previously been governed by a line of Pāl kings, were then under the rule of the Chutiyās, who had established a kingdom of considerable power; while the Kachāris occupied the western part of Sibsāgar, the valley of the Dhansiri, and the greater part of Nowgong. Sukapha, finding his further progress barred, settled down among the Morans and Borahis, who were gradually absorbed into the Ahom community, a process that was accelerated by frequent intermarriages due to the paucity of Ahom women. In this way, aided probably by fresh streams of immigration from Pong, the Ahoms increased rapidly in numbers and power. Early in the fourteenth century there is a vague reference to a war with a Rājā of Kāmata, who, it is said, was forced to sue for peace. A few years later the Ahoms became involved in a war with the Chutiyās. In 1376 the latter pretended to make peace, and then treacherously murdered the Ahom king, Sutupha, at a regatta on the Safrai river, held to celebrate the cessation of hostilities. This led to a renewal of the war; the Chutiyās were worsted, but their final overthrow did not take place until 1523, when Suhunmung, otherwise known as the Dihingia Rājā, who reigned from 1497 to 1539, utterly defeated them with heavy slaughter and annexed their country, which he placed in charge of an Ahom viceroy called the Sadiyā-khowa Gohain. A number of Ahoms from Gargaon were settled at Sadiyā, while the leading families of the Chutiyās were deported to a place not far from Tezpur, and many of

[1] The account here given of the Ahom kings is based mainly on manuscript *buranjis*, or histories written in the Ahom language and character on strips of bark of the *sāchi* or *agar* tree (*Aquilaria Agallocha*). In former times all the leading families had their own *buranjis*, which were written up from time to time; many of these have disappeared, but a number still survive, and translations of these have been prepared.

their artisans were brought to the Ahom capital. Meanwhile, there had been numerous expeditions against various Nāgā tribes, which were generally successful; and in 1490 the first war occurred with the Kachāris, by whom the Ahoms were defeated on the banks of the Dikho river. This set-back was, however, only temporary; and little more than thirty years afterwards we find the Dihingia Rājā, whose victory over the Chutiyās has just been mentioned, fighting with the Kachāris on the bank of the Dhansiri. The Kachāris won a few minor successes, but in the end they were utterly vanquished. Their king was deposed and a new ruler named Detsung installed in his place. In 1536 hostilities again broke out; Detsung was taken and killed; his capital at Dimāpur was sacked; and the Kachāris were shorn of all their possessions in the valley of the Dhansiri and north of the Kalang river in Nowgong.

The Dihingia Rājā, like so many Ahom kings, met his death at the hands of an assassin, who was instigated, it is said, by his own son. His reign is memorable, not only for the extirpation of Chutiyā and Kachāri rule from the valley of the Brahmaputra and (it is alleged) for the acknowledgement of his supremacy by the Koch king Biswa Singh, but also for the repulse of two Muhammadan expeditions. The second of these, in 1532, was led by a commander named Turbak, who worsted the Ahoms in several engagements, but was at last utterly defeated on the bank of the Bhareli river. He himself was slain with large numbers of his followers, and many were taken prisoners and settled in the Ahom country: these are reputed to be the ancestors of the Moriās. The use of fire-arms by the Ahoms dates from the close of this war. These two expeditions, though the first in which the Muhammadans are recorded to have come into collision with the Ahoms, were not by any means the earliest invasions by them of country now included within the Province of Assam. In 1384 they had conquered and annexed Sylhet, excluding the submontane tracts in the north and south, which were held by Jaintiās and Tipperas, and at an even earlier date they had begun to harry the lower portion of the Brahmaputra Valley; but here, though their superior arms and discipline generally brought them a temporary success, their expeditions all ended in failure, induced by disease, ignorance of the country, the difficulty of communications, especially during the rainy season, and the impossibility of bringing up reinforcements to repair losses.

The power of the Ahoms continued to grow and their dominions to expand, and there was almost constant warfare between them and one or other of their neighbours—Narās [1], Nāgās, Kachāris, and Kochs.

[1] The Narās occupied the country round Mogaung on the other side of the Pātkai. They are commonly regarded as Shans, but Ney Elias thought that they included in their composition a large aboriginal element.

They were nearly always successful; but they sustained a crushing defeat at the hands of the Koch king, Nar Nārāyan, whose capture of the Ahom capital has already been referred to. Their recovery from this reverse was, however, extraordinarily rapid, and a fresh turn in the wheel of fortune soon gave them their revenge.

Nar Nārāyan was succeeded in the Western Koch kingdom by his son Lakshmī Nārāyan, who soon became embroiled with Parīkshit, the son of Raghu and his successor in the eastern kingdom. Being unable to hold his own, Lakshmī Nārāyan invoked the aid of the Muhammadans, who took Parīkshit's fort at Dhubri and soon afterwards invested his capital at Barnagar on the Manās. Parīkshit held out there for a time, but was at last forced to surrender and was sent a prisoner to Delhi, while his brother Bali Nārāyan fled to the Ahom king, Pratāp Singh, who refused to give him up.

The Muhammadans, therefore, invaded the Ahom country with a force of from 10,000 to 12,000 horse and foot and 400 large ships. They gained a victory near the mouth of the Bhareli river, but were soon afterwards annihilated in a night attack. Pratāp Singh thereupon installed Bali Nārāyan as successor to Parīkshit, and advanced and took Pandu near Gauhāti, which he fortified. He next laid siege to Hājo, but was driven back. The war dragged on in Lower Assam for some years with varying success, but in 1637 the governor of Dacca determined to take more vigorous measures, and he dispatched what was practically a new army. This measure met with immediate success. The Ahoms were driven out of Kāmrūp, Bali Nārāyan was killed, and a treaty was made by which the Barnadī was taken as the boundary between Ahom and Muhammadan territory.

The Koch kings continued to rule west of the Sankosh as vassals of the Muhammadans; but when the Mughal emperor Shāh Jahān fell sick in 1658, Prān Nārāyan, who was then on the throne, took advantage of the confusion ensuing on the wars of succession to throw off his allegiance, and defeated the Muhammadan *faujdār* of Goālpāra. The latter retreated to Gauhāti, but was driven thence by the Ahom king, Jayadhwaj Singh. Prān Nārāyan proposed to the latter a friendly division of Lower Assam, but his overtures were rejected and he was soon compelled to retreat beyond the Sankosh. The whole of the Brahmaputra Valley thus fell into the hands of the Ahoms.

When order was restored in Bengal, and Mīr Jumla became governor at Dacca, he first attacked and defeated Prān Nārāyan, and then advanced against the Ahoms, with an army, according to their writers, of 12,000 horse and 30,000 foot and a powerful fleet. The Ahoms were worsted on both land and water, and were gradually driven back. In spite of the great difficulty of locomotion due to the numerous water-courses and the vast expanse of dense jungle, Mīr Jumla marched

steadily up the south bank of the Brahmaputra, his fleet keeping pace with his army, and at last occupied Gargaon, the Ahom capital, where he halted for the wet season, which was now close at hand. The rains set in with unexampled severity, and the country soon became a quagmire. Supplies were hard to get and the Ahoms harassed the Mughals by repeated night attacks, and destroyed some outlying garrisons and isolated detachments. As the rains progressed, the position of the Muhammadans became more and more trying; and to the terrors of a persistent but unseen enemy were added severe epidemics of disease, especially dysentery. Mīr Jumla himself did not escape. Broken in health, he found himself unable to resist the clamour of his troops to be led back to Bengal; early in the cold season a treaty was patched up, and he hurried back to Dacca, where he died soon afterwards. The Muhammadan historians have left on record an interesting account of their opponents. Their resources were considerable, and in the course of the expedition the Musalmāns captured more than 1,000 war sloops from the enemy, many of which could accommodate from three to four score sailors. They also took nearly 700 guns, some of them of considerable size. Extensive fortifications had been erected on both sides of the river near Tezpur, and the country between Kaliābar and Gargaon was said to be well cultivated and adorned with gardens and orchards. Gargaon itself was a town of considerable size, and the historian waxes enthusiastic over the splendours of the Rājā's palace. The genuine Ahoms are described as keen and fearless soldiers, but their number was not large, and the Kalitā levies were of very small account. The Ahoms lost no time in retaking the country they had lost; and two years later we find them in undisputed possession of the whole of Kāmrūp, and the advance guard of the Mughals located at Rangāmāti in Goālpāra[1]. For a time, however, internal troubles and a long series of conspiracies threatened to do what external aggression had failed to effect, and in the brief space of eleven years there were no less than seven Ahom kings, not one of whom died a natural death. The Muhammadans took advantage of these disturbances to recover possession of Gauhāti, but they were finally driven out in the reign of Gadadhar Singh, who ascended the throne in 1681.

The next king, Rudra Singh, being free from all fear of Muhammadan invasion and secure in his possession of Kāmrūp, began to extend his kingdom in other directions. He took the south of Nowgong from the Kachāris and occupied Maibang in the North Cāchār Hills, whither they had removed their capital on being ousted from Dimāpur.

[1] Not the least interesting of the relics of this period is a cannon now at Dikom bearing two inscriptions, the one in Persian stating that it had been made for use in the conquest of Assam, and the other in Sanskrit recording the fact that the Ahoms had taken it from the Muhammadans in battle.

replaced the latter by others of a more humane disposition, caused a general amnesty to be proclaimed, and took such other steps as seemed needed to restore confidence and ensure good government. He spent the rainy season of 1793 at Gauhāti, and in January, 1794, after pacifying Mangaldai and Nowgong, advanced to Kaliābar. Jorhāt, where the Bura Gohain was still holding out against the Moamarias, was relieved by a small force; and a decisive victory was gained about 12 miles from Rangpur, which was occupied in March. Sir John Shore had now succeeded Lord Cornwallis as Governor-General, and one of his first acts was to recall Captain Welsh, in spite of the vigorous protests of the Ahom king. The latter, when left once more to his own devices, dismissed most of the officials who had been appointed on Welsh's recommendation, renewed the persecution of the Moamarias, and wreaked his vengeance on his old enemies who had made their submission under a promise of pardon; and for a time it seemed likely that Assam would once more relapse into anarchy. This was prevented by the energy of the Bura Gohain, who organized a body of troops disciplined on the English model, and, with their aid, the Moamarias and other malcontents were held in check.

Shortly after the accession of Chandra Kanta[1], in 1810, the Ahom governor at Gauhāti fell into disgrace, and fled for safety to Bengal. After seeking in vain the assistance of the British, he gained the friendship of the Burmese envoy then at Calcutta and went with him to Amarapura, where he persuaded the Burmese king to send an expedition to Assam. In 1816–7 an army of 8,000 men was dispatched from Burma, which, having crossed the Pātkai and gained fresh adherents among the hill chiefs, entered Assam, occupied the whole country as far as Jorhāt, and reinstated the Gauhāti governor. The force then returned to Burma. They had barely departed when fresh dissensions took place; the governor, who had invoked the aid of the Burmese, was assassinated; Chandra Kanta was deposed, and Purandar Singh, a direct descendant of Rājā Rājeswar Singh, was installed in his place. The friends of the late governor appealed to the Burmese, who once

[1] Gaurināth was followed by a very distant connexion named Kamaleswar, a descendant of Gadadhar Singh; and Chandra Kanta, the next king, was Kamaleswar's brother. In the early days of Ahom rule the succession devolved from father to son with great regularity; but in later times brothers often succeeded to the exclusion of sons, and sometimes, as in the case of Kamaleswar, even very distant relations did so. Much depended on the wishes of the previous king, much on the action of the great nobles, with whom, in theory at least, the choice seems to have rested, and much on the personal influence of the rival candidates. The one essential qualification was that they must be of the royal blood. The person of the monarch was sacred and any marked blemish, even the scar of a carbuncle, operated as a disqualification. Hence arose the practice, often followed by the Ahom kings, of mutilating all likely rivals. Mutilation was usually effected by slitting the ear.

more appeared on the scene and reinstated Chandra Kanta, but on this occasion it soon became clear that they meant to stay. Chandra Kanta made a vain effort to throw off their yoke and fled to British territory, where Purandar Singh had frequently taken refuge. The Burmese during their occupation of the country treated the unfortunate inhabitants with extreme barbarity. The villages were plundered and burnt, and the inhabitants were driven into the jungle to live as best they could.

The gradual decline of the Ahom power had caused a relaxation of their pressure on the Kachāri kings, whose capital was now at Khāspur in the plains of Cāchār; but the latter soon found a fresh enemy on their eastern frontier, where the Manipurīs became so threatening that, from 1817 onwards, constant appeals for help were made to the British. These were rejected until early in 1824, when intelligence of a projected invasion of Cāchār and Jaintiā by the Burmese induced the British Government, which had received great provocation from Burma in other quarters, to intervene. The first collision with Burmese troops occurred on the Cāchār frontier; but the scene of the main operations in Assam was in the Brahmaputra Valley, where a British force of 3,000 men advanced without much opposition as far as Kaliābar. On the approach of the rainy season the troops returned to Gauhāti, and the Burmese reoccupied Nowgong, where they committed terrible atrocities on the helpless inhabitants. Many were put to death and many fled for their lives into the hills to the south; of the latter, the majority died of starvation, and only a small remnant lived to reach the plains of the Surmā Valley. When the rains were over, the British again advanced; and the Burmese were driven out of the Province after a few fainthearted and ineffectual attempts at resistance, but in the course of their retreat they carried off as slaves upwards of 30,000 Assamese.

By the Treaty of Yandabo in 1826 the Burmese ceded Assam to the East India Company, and Mr. Scott, the Commissioner of Rangpur, was appointed to administer the country. The Moamarias in the south of Lakhimpur District were left under their own ruler, the Bor Senāpati; and the Sadiyā-khowa Gohain or Khamti chief of Sadiyā, who had dispossessed the Ahoms there during the Moamaria rebellions, was confirmed as the Company's feudatory in that tract, while, in 1833, the rest of Lakhimpur District and Sibsāgar were restored to Purandar Singh. These arrangements, however, did not last long. In 1838 Purandar Singh declared himself unable to carry on the administration, and his territory was taken over. In 1835 the Sadiyā-khowa Gohain was removed from his post; but the local Khamti chiefs were allowed to manage their own internal affairs till 1839, when, without any warning, they made a night attack on the garrison of Sadiyā, and killed

Colonel White, the officer in command, and a number of his sepoys. The Khamtis were then deported to places lower down the river, and the power of their chiefs was finally extinguished. In 1842 the Bor Senāpati died, and on his son declining to accept the terms of settlement offered to him, his country also was annexed.

In Cāchār the Rājā was replaced on the throne, but was soon forced to relinquish the northern portion of his domains to a rebel named Tula Rām. The Rājā was assassinated in 1830 and, in the absence of any lawful heir, the Cāchār plains were annexed to British territory. Five years later Tula Rām ceded a considerable tract, and the rest of his country was taken over soon after his death in 1850, as his sons had proved unable to manage it. In 1835 the Rājā of Jaintiā was dispossessed of his estate in the plains, in consequence of the repeated abduction of British subjects who were sacrificed to Kālī, the tutelary goddess of his family. He then declared himself unwilling to continue in possession of his hill territory, over which he had but little control, and it also was included in the Company's dominions. The Khāsi Hills to the west were conquered in 1833, as the result of an attack made on a party engaged in constructing a road through the hills; but the people were left in a state of *quasi*-independence under their own chiefs, with the exception of a few villages which were acquired for special reasons, either at the time of the conquest or at some subsequent date: among the latter may be mentioned the site of Shillong, the capital of the Province as now constituted. The occupation of the Nāgā Hills has been a gradual process, due to the necessity of protecting British subjects from Nāgā raids. It commenced in 1866, when a frontier District was formed, with head-quarters at Sāmaguting, and the last addition was made in 1904, when the Eastern Angāmī country was formally annexed. Theoretically, the Gāro Hills always formed part of Goālpāra District; but for many years British control over the Gāros was limited to ineffectual efforts to suppress their constant raids on the adjoining plains, by means of punitive expeditions or by forbidding them to trade in the plains. In 1869 the tract was formed into a separate District, with head-quarters at Turā, and order was instantly established in all but the more remote villages. The inhabitants of the latter, having perpetrated fresh raids, were brought under subjection in 1872–3 with the aid of a few small detachments of police, who met with no serious opposition. Prior to 1890, the history of British relations with the Lushais was one of constant raids by the latter, followed by infructuous punitive expeditions. In that year, after one of these expeditions, it was decided to try the expedient of establishing military outposts in their midst. A treacherous attack on two of these outposts led to fresh operations and to the permanent annexation of the Lushai Hills,

which are now in charge of a Superintendent, with head-quarters at Aijal.

The State of Manipur has a fairly ancient history; but the present régime dates only from 1714, when the reigning chief adopted Hinduism, which has now gained a remarkably strong hold on the people. By the Treaty of Yandabo, the Burmese agreed to the restoration to the throne of Rājā Gambhīr Singh, whom they had ousted. He and his descendants enjoyed a large measure of independence, and the British Government rarely interfered in local affairs except in the case of risings or disputes regarding the succession. In 1890, in the course of one of these risings, the Mahārājā was driven from his palace and abdicated in favour of the Jubrāj, but he subsequently repudiated his abdication. The Government of India decided to confirm the Jubrāj as Rājā, but directed the Chief Commissioner to arrest and deport the Senāpati, who had been the ringleader in the plot. He proceeded to Manipur and called on the Senāpati to surrender, but the latter refused and resisted the troops sent to seize him. The Chief Commissioner and four other officers were then induced, under a promise of safe-conduct, to attend, alone and unarmed, a *darbār* in the palace. The discussion was fruitless, and they started to return, but a crowd of Manipurīs closed in on them and two of them were wounded with spears. One died of his wound, and all the other officers, after a short detention, were cruelly murdered. This led to a military expedition. Manipur was occupied by British troops; the ringleaders were punished; the new Rājā was deposed, and a scion of a collateral line was raised to the throne. Since this time a large measure of control has been vested in the resident British officer, who is now designated Political Agent and Superintendent of the State.

Until 1874, Assam was administered as part of Bengal, but in that year it was formed into a separate Province under a Chief Commissioner. The officers who have held this appointment since that date are as follows:—

Colonel R. H. Keatinge	1874
Sir Steuart Bayley	1878
Mr. (afterwards Sir) Charles Elliott	1881
Mr. (afterwards Sir) William Ward	1885 Offg.
Mr. (afterwards Sir) Dennis Fitzpatrick	1887
Mr. (afterwards Sir) James Westland	1889
Mr. J. W. Quinton	1889
Sir William Ward	1891
Mr. (afterwards Sir) Henry Cotton	1896
Mr. (afterwards Sir) J. B. Fuller	1902

NOTE.—Officiating appointments for less than six months are omitted.

Assam is somewhat destitute of archaeological remains of interest. The natives of the Province have little aptitude for handicrafts, and

many of the temples that exist were probably constructed by artisans from Hindustān. The shrine of Shāh Jalāl, situated in a mosque at Sylhet, is still in an excellent state of preservation, and there are some interesting ruins at JAINTIĀPUR. Kāmrūp has many temples, but most of them are small and have fallen into disrepair, the two best known being the temple to KĀMĀKHYA on Nilāchal hill near Gauhāti, and the temple of Hayagriva Mādhab at HĀJO. There are also the remains of an interesting stone bridge in the Silā Sindurighopā *mauza*, said to have been constructed by Bakhtiār Khiljī when he invaded Assam at the beginning of the thirteenth century. Near Tezpur are the ruins of what must have been a magnificent temple; but not one stone is left standing upon another, and its builder and designer are alike unknown. DIMĀPUR, in the extreme south-western corner of Sibsāgar District, was once the capital of the Kachāri dynasty, and was evidently a place of considerable importance, though it is now situated in the midst of an enormous forest. Sibsāgar has numerous temples built by the Ahom kings. They are made of thin bricks of excellent quality, and are generally ornamented with bas-reliefs; but the fact that figures of camels not unfrequently appear suggests that they were erected under the direction of foreign artisans, as camels must always have been very scarce in a damp and marshy country like Assam. These temples were generally built on the side of large tanks, whose construction must have entailed an enormous expenditure of labour. The largest tank, at Sibsāgar, covers an area of 114 acres. Immense tanks, with temples on their banks, were also constructed at Gaurisāgar, Rudrasāgar, and Jaysāgar, all within a few miles of the Sibsāgar tank. At Gargaon near NĀZIRĀ are the ruins of one of the Ahom capitals. That the native rulers of Assam extended their frontiers right up to the Himālayas is shown by the remains of a fort at Bhālukpāng in the gorge of the Bhareli, and of two large forts some distance north of Sadiyā. Another interesting ruin near that place is the small temple at which a human victim was annually offered for many centuries by the Chutiyā priests. Scattered about the valley are the remains of great roads and fortifications which evidently protected the capital of some local prince. The Baidargarh in Kāmrūp, which is said to have been constructed by king Arimatta about the thirteenth century, and his son Jangal's fort in Nowgong, deserve special mention, as also the remains of extensive earthworks at Pratāpgarh, near Bishnāth, in Darrang District.

Population.

The population of Assam, including the Native State of Manipur, returned at the Census of 1901, amounted to 6,126,343 persons, living in 19 towns and 22,326 villages. It can be most conveniently considered with reference to the three natural divisions into which the Province falls.

Over the greater part of the Surmā Valley there is no longer any

scarcity of population. In the Cāchār plains the density is only 201 persons per square mile; but the country is much broken by hills and marshes, and of recent years it has become necessary to throw open considerable areas of 'reserved' forest to meet the demand for cultivable land. The neighbouring District of Sylhet is fully peopled, and in the Habiganj subdivision the density rises to 583 persons per square mile, which for a purely rural population must be considered high. In the Brahmaputra Valley the condition of affairs is very different. Though three times the size of the valley of the Surmā, it supports a slightly smaller population, and the density in its Districts varies from 68 persons per square mile in Nowgong to 153 in Kāmrūp. A considerable portion of the unsettled area consists of steep jungle-covered hills, and of marshes that could only grow cold-season crops or the longest-stemmed varieties of rice; but much good land awaits settlement, and there is probably room for two or three million more inhabitants. There are, however, places where the population is already fairly dense, and in certain rural tracts in the centre of Kāmrūp and Sibsāgar it exceeds 600 persons per square mile. The Hill Districts are very sparsely peopled; but the area of land suited for permanent cultivation is small, and large tracts of waste are required for the support of tribes that live by shifting cultivation.

The population of Assam is almost entirely rural. Excluding Manipur, less than 2 per cent. of the people enumerated in 1901 were living in urban areas. The largest towns are SYLHET (13,893), GAUHĀTI (11,661), DIBRUGARH (11,227), SILCHAR (9,256), BARPETĀ (8,747), and SHILLONG, the head-quarters of the Administration (8,384). Many of the towns are little more than large villages, and the average population of eighteen places dignified with the name was only 6,315. IMPHAL, the capital of Manipur, had a population of 67,093; but the rural character of the place is illustrated by the fact that more than half of the working males residing there were agriculturists by profession. Except in the Nāgā, North Cāchār, and Lushai Hills, the boundaries of a village are not clearly defined, and the cottages are scattered over a considerable area. This tendency is particularly marked in the Assam Valley. Rice is grown on broad plains, often several miles in length, dotted over with clumps of bamboos and fruit trees, in which are buried the houses of the cultivators. A village, in the sense of a compact block of houses set in the midst of its fields at a considerable distance from any other centre of population, is the exception rather than the rule in the plains of Assam; and for census purposes a village was taken to be the area so designated by the cadastral survey. In many cases, however, the cadastral village is little more than a tract of land which can conveniently be surveyed on one sheet of the map, and this fact has to be borne in mind when examining the statistics

showing their average size. In Sylhet there is so little highland that the people are compelled to live in fairly close proximity, but all over the Province there is a marked preference for small hamlets. In 1901, 56 per cent. of the population were living in villages of less than 500 inhabitants; 38 per cent. in those ranging from 500 to 2,000, and less than 5 per cent. in those containing from 2,000 to 5,000.

The first regular Census, which was taken in 1872, disclosed a population of 4,150,769. Manipur and the Lushai Hills were not included, and the figures for the Hill Districts were only estimates. In 1881 the population, including Manipur, was 5,128,862; and in the plains alone there was an increase of over 18 per cent., a fact which threw grave doubts on the accuracy of the former enumeration. In 1891 Manipur again dropped out, the census schedules having been destroyed in the rising, but the Lushai Hills appeared for the first time, and the population was returned at 5,477,302. The population of the plains increased by nearly 11 per cent., but part of this increase was no doubt due to the greater accuracy of the enumeration in 1891. In the last intercensal period the increase was 649,041, or 12 per cent., but this was largely due to the inclusion of the figures for Manipur and the South Lushai Hills; and in the plains the increase was less than 6 per cent. The year 1897 was very unhealthy, and in Central and Lower Assam an abnormal mortality was not confined to that year alone. The population of Kāmrūp decreased by over 7 per cent.; and, though there was an increase in Darrang, it was entirely due to immigration, and the indigenous inhabitants are believed to have decreased by 8 per cent. The lowest depth was, however, reached in Nowgong, where the people were more than decimated by a peculiarly malignant form of malarial fever known as *kalā-āzār*. The population of the District as a whole fell by nearly one-fourth, and it was calculated that the indigenous inhabitants had decreased by over 30 per cent. In Upper Assam there was a satisfactory growth of the indigenous population, and an enormous development of immigration during the decade. The population of Sibsāgar increased by nearly one-fourth, and that of Lakhimpur by almost a half. The best indication of the natural growth of the people is, however, obtained by excluding the figures for Manipur and the Lushai Hills, and comparing the figures for those born and enumerated in the Province in 1891 and 1901. Among this class it appears that the increase during the last intercensal period was only a little more than one per cent.

There was, however, a great growth of the immigrant population, which increased by more than one-half, and in 1901 exceeded three-quarters of a million, or nearly 13 per cent. of the total population of the Province. The great majority of these foreigners are coolies brought up to the tea gardens, though a certain amount of movement

takes place across the frontier where Assam marches with Bengal. More than half a million people came from that Province, a quarter of a million of whom had been born in the Division of Chotā Nāgpur. About 109,000 persons came from the United Provinces, and 84,000 from the Central Provinces. The preponderance of the foreign-born element in the population was most pronounced in Lakhimpur, where they formed 41 per cent. of the whole, and in Darrang and Sibsāgar (25 per cent.). Cāchār (plains) was close behind, with 24 per cent. In Sylhet, on the other hand, though the total number of foreigners was considerable, they formed only 7 per cent. of the population. There is very little emigration, and only 51,000 persons born in Assam were found in other parts of India. The great majority of these persons had merely crossed the frontier from Goālpāra and Sylhet into Bengal.

Little reliance can be placed upon the age statistics, as only a small proportion of the population have even an approximate idea of the number of years which they have lived, and though the mistakes made tend to some extent to neutralize one another, there is a marked tendency to select multiples of five. Inaccurate though the figures are, they show that the exceptional unhealthiness which prevailed between 1891 and 1901 affected the fecundity of the people; and the decrease in the proportion of children was especially pronounced in Districts like Nowgong and the Khāsi Hills, where the death-rate was exceptionally high. The most prolific section of the people includes the animistic tribes, and it seems possible that the system of early marriage may have a prejudicial effect upon the reproductive powers of Hindu women.

The registration of vital statistics is compulsory only on tea gardens, and in the District and subdivisional head-quarters stations in the plains (population in 1901, 765,000), but attempts are made to collect information in all the plains Districts and in a small portion of the hills. In Goālpāra the returns are submitted in writing by the village *panchāyats* and are fairly correct. In the Surmā Valley vital statistics are reported by the paid village *chaukīdārs*, but their accuracy leaves much to be desired. In Assam proper they are collected by the *gaonburas* or village headmen, and are extremely incomplete. The mean annual birth-rate registered in the plains Districts during the five years ending with 1902 was only 33 per 1,000, varying from 42 in Goālpāra, where public health had been bad, to 25 in Sibsāgar and Lakhimpur, where it had been good. The mean death-rate registered was 30 per 1,000, varying from 41 in Nowgong to 21 in Sibsāgar. The returns have thus but little absolute value, though, as the amount of error is fairly constant, they afford some clue to the comparative unhealthiness of different years. The sanitary conditions of Assam are

far from satisfactory. The tract at the foot of the hills and the valleys running up into them are excessively malarious; and as the Province practically consists of two valleys with the intervening range, the proportion of this feverish *tarai* land is higher than in other parts of India. On the other hand, the open country is fairly healthy, and though the climate is damp it is also cool. The most prevalent diseases are fever, bowel complaints, pulmonary affections, cholera, worms, small-pox, various cutaneous disorders, and, in some localities, goitre. Leprosy is by no means uncommon, and in 1901 more than 5,000 persons were said to be afflicted with this disease. The birth and death rates in 1881 and subsequent years, and the mortality ascribed to the principal diseases, are shown in the following table:—

Year.	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel complaints.
1881	4,483,705*	19	16	1	1	9	2
1891	5,021,084	29	30	5	...	15	3
1901	5,275,706	34	28	1	1	16	2
1903	5,275,706	36	27	2	...	14	2

* This is the population among whom deaths were registered. Births were registered only among a population of 2,225,271.

These rates do not represent the actual mortality due to these different ailments, but give a fairly correct idea of their comparative importance.

The most important factor in the medical history of the Province during the last twenty years has been *kalā-āzār*. This disease was known as far back as 1869, when an intense form of malarial fever was reported to be inducing a high rate of mortality in the low and densely wooded Gāro Hills; but it first came into prominence in 1883, when it entered that portion of Goālpāra District which lies south of the river. In 1888 it spread to Kāmrūp, and thence to Nowgong and to Mangaldai on the north bank of the Brahmaputra, and of recent years it has reached Sylhet. The virulence of the epidemic is now gradually abating, and it has as yet failed to effect a lodgement in Upper Assam, but it has been the cause of terrible mortality in the Districts it attacked. Between 1881 and 1891 the population of the Goālpāra subdivision decreased by 18 per cent.; and the population recorded in Kāmrūp in 1891 was estimated to have been less by 75,000 people than it would have been had there been no deaths from *kalā-āzār*. During the next decade the population of Kāmrūp decreased by 7 per cent., that of the Mangaldai subdivision of Darrang by 9 per cent., of Nowgong District by 25 per cent., and of the North Sylhet subdivision by 4 per cent.; and the excessive mortality indicated by these figures

was, at any rate in the Assam Valley, chiefly due to this disease. Its nature is still a cause of speculation to the medical world. In all essentials it seemed to be a form of malarial fever, but the suggestion that malarial fever could be infectious was till recently opposed to all accepted theories on the subject. Subsequently, it was thought that *kalā-āzār* was only an acute form of malarial poisoning, the difference between it and ordinary fever lying in the rapidity with which it produces a condition of severe cachexia, the small proportion of recoveries, and the ease with which it can be communicated from the sick to the healthy. Quite recently, the malarial theory of origin has been again assailed, and the whole question is still involved in uncertainty. Persons attacked seldom died in less than three months, and often lingered for two years; and isolation and segregation were thus impossible, once the disease had obtained a foothold. Plague did not appear in Assam till the rainy season of 1903, when it broke out among the foreign grain merchants in Dibrugarh. The disease was quickly stamped out, and only twenty-eight deaths occurred. The age statistics recorded at the Census and the vital statistics supplied by the collecting agency are so inaccurate that it is impossible to place any reliance on the recorded death-rate for infants under one year of age. It is, however, generally supposed to be about 218 per mille.

Every Census in Assam has disclosed a deficiency of women, and in 1901 there were only 949 females to every 1,000 males. This deficiency is to some extent due to the disproportion between the sexes among immigrants; for those born and enumerated in the Province there are 977 women to every 1,000 men. Among the animistic tribes women usually predominate, and, taking those born in the Hill Districts and enumerated in the Province, the proportion was 1,061 females to 1,000 males. This phenomenon is probably due in part to the practice of adult marriage, and in part to the good position usually assigned to women in the hills. In Nowgong it appears that there was some truth in the popular idea that *kalā-āzār* spared the female members of the family, as at the last Census, among those born and enumerated in the District, the women exceeded the men in numbers. The deficiency of women was most pronounced in Sibsāgar and Lakhimpur, where there were only 886 and 862 females to every 1,000 males. This is partly due to an actual deficiency of women among the indigenous inhabitants, partly to the large foreign element in the population.

In Assam, as in other parts of India, wedlock is taken as a matter of course, and in 1901 more than half the population were either married, or had at any rate performed the ceremony at some period of their lives. Child-marriage is common among both Hindus and Muhammadans in the Surmā Valley and in Goālpāra; but in Assam proper, Brāhmans and Ganaks alone adhere rigidly to this rule, and

the lower castes usually defer marriage till the girl is of an age to be able to enter on her duties as wife and mother. Where adult marriage prevails, anti-nuptial chastity is not invariably demanded; and in Assam proper the marriage ceremony often consists of little more than a public acknowledgement of union, which does not receive the sanction of any priestly blessing. The purchase of a bride by service is also not uncommon, and during the time that the man is serving in the house of his prospective father-in-law, he is usually allowed free access to the girl of his choice. There is, however, a curious survival among the Kūkis which points to a time when this permission was not accorded. Here pregnancy entails no disgrace, but on no account must a girl give birth to a living child in her father's house. At the seventh month the baby's head is crushed in the womb, and premature delivery is brought on, in spite of the fact that the process is attended with much risk to the young mother. The age of marriage among men depends largely upon the cost of the bride; and notwithstanding the easiness of the hill girl's morals, men marry early among the animistic tribes, as women are fairly numerous and therefore cheap. When the knot is once tied, the hill woman usually settles down and becomes an exemplary wife and mother, except among the Khāsis, where divorces can be obtained on almost any pretext, and women not unfrequently change their husbands more than once. Such laxity in the marriage laws is bound to be accompanied by uncertainty as to the paternity of the children born, and it is perhaps for this reason that the Khāsi husband is not master in his own house, and that inheritance goes through the female line. Polygamy is nowhere common, as few men can afford the luxury of a second wife. Divorce is recognized by Muhammadans and the animistic tribes, and, in practice, by the lower castes of Hindus, unless the marriage has been contracted by the *hom pura* rite, which is looked upon as indissoluble.

The joint family system is far from prevalent in Assam proper, and even among the upper classes seldom extends beyond the second generation. In the Surmā Valley also it is the exception rather than the rule, and among the middle classes generally ends with the third generation.

The distribution of population by civil condition in 1891 and 1901 (for British territory only, excluding Manipur) is shown in the following table:—

Civil condition.	1891.			1901.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
Unmarried	2,664,494	1,573,539	1,090,955	2,827,613	1,666,963	1,160,650
Married .	2,207,826	1,110,525	1,097,301	2,366,952	1,194,774	1,172,178
Widowed .	562,923	114,844	448,079	647,313	142,323	504,990

The two main indigenous languages of the Province are Bengali, which was spoken by 48 per cent. of the population in 1901, and Assamese, which was returned by 22 per cent. Bengali is the common vernacular of the Surmā Valley, where it is used by 87 out of every 100 people, and of Goālpāra (69 per cent.). Assamese is used by 83 per cent. of the inhabitants of Kāmrūp; but in the tea Districts the proportion of foreigners is very large, and in Darrang Assamese was returned by little more than half the population, and in Lakhimpur by only 39 per cent. In addition to the two main vernaculars, there are a large number of languages peculiar to Assam, most of which belong to the Tibeto-Burman stock, and which, though gradually giving place to Assamese, are still largely used. The most important are: Bodo or plains Kachāri, Khāsī, Synteng, the various forms of Nāgā dialects, Gāro, Manipurī, Lushai, Kūki, Mīkīr, and Mīrī. The principal foreign languages are: Hindustāni, Mundārī, Santālī, and Oriyā. The number of persons in British territory (excluding Manipur) who returned these different forms of speech in 1891 and 1901 is shown in the following table. Altogether, no less than 167 different languages were returned in Assam in 1901.

Language spoken.	1891.	1901.
Bengali	2,741,947	2,947,916
Assamese	1,414,285	1,349,694
Eastern Hindī, Western Hindī, and Hindustāni.	229,456*	351,908
Bodo, Dimasa, and Mech	269,346	237,982
Other languages	780,209	954,378†

* Figures for Hindī.
† Includes 123,481 Khāsī, 54,253 Synteng, 106,035 Nāgā, 133,411 Gāro, 72,011 Lushai, 82,283 Mīkīr, 40,472 Mīrī, 37,411 Mundārī, 30,128 Santālī, and 23,755 Oriyā.

The earliest inhabitants of Assam were probably the various offshoots of the great Indo-Chinese hordes, whose head-quarters are supposed to have been on the upper waters of the Yang-tse-Kiang and Ho-ang-ho. At the same time, the Assam Valley must have been colonized by Hindus from the west at a very early date; and Hindu princes were reigning at the eastern end near Sadiyā at the time of the invasion of the Chutiyās, a tribe of Bodo origin, about a thousand years ago. The Chutiyās overthrew the Hindus, but in their turn gave way before the Ahoms, a Shan tribe who crossed the Pātkai from the kingdom of Pong in the thirteenth century, and gradually extended their sway over the whole valley. In the course of their expansion they overthrew the Koch kings, a dynasty of Bodo origin who had attained to considerable power in North-Eastern Bengal; and they repulsed the Muhammadans, who had made several attempts upon the valley and succeeded in holding for a considerable time the two lower Districts of Goālpāra and Kāmrūp. The last wave of immigration was not one of either con-

querors or colonists in the ordinary sense of the term, but of tea-garden coolies, who are now beginning to form an important element in the population of the upper Districts of the Brahmaputra Valley.

The various tribes of Indo-Chinese origin fall into several groups. The first are the Khāsis, who are believed to be an isolated remnant of one of the earliest waves of migration from the north-east. They differ in many ways from all their neighbours, and on linguistic grounds it has been suggested that they may be connected with the Palaungs and Was in Upper Burma. The second great division includes the Dimasa or hill Kachāri, the Bodo or plains Kachāri, who are called Mech in Goālpāra, the Rabhās, the Gāros, the Lalungs, and the eastern sub-Himālayan group consisting of the Daflās, Mīris, Abors, and Mishmis. The Tipperas who occupy the hills south of Sylhet are also of Bodo stock, and there are good reasons for supposing that some of the earliest inhabitants of the Surmā Valley were members of this race. Another group comprises the Lushais and Kūkis, who have migrated from the south, and seem to be connected with the Manipurīs; and the Nāgās, whose extraordinary ferocity differentiates them in some degree from the other hill tribes of the Province. The Mīkīrs are a peaceful tribe, whose language is akin to both Bodo and Nāgā; but language is by no means a certain test of ethnical affinity. The Kachāris, Rabhās, and Mechs live on the high grassy plains at the foot of the Himālayas, but most of the remainder occupy the hills of the Province. They are all of sturdy physique, and of a marked Mongolian type. They place few restrictions upon their natural appetites, and the warlike and aggressive spirit of the Gāros, Nāgās, and Lushais for many years gave trouble to the Government. At the present day, many of the Nāgā tribes beyond the British frontier are still bloodthirsty and naked savages. Another division of the Indo-Chinese inhabitants is a branch of the great Tai race, to which belong the Siamese and the Shans of Upper Burma. It includes the Ahoms, who have now to all intents and purposes become a Hindu caste, and several small colonies of Shans who have migrated into Assam in comparatively recent times. The strength of the principal tribes in 1901 was: Kachāris, 240,000; Gāros, 128,000; Rabhās, 67,000; Mechs, 75,000; Mīkīrs, 87,000; Lalungs, 36,000; Lushais, 63,000; Kūkis, 56,000; Manipurīs, 256,000; Nāgās, 162,000; Khāsis, 178,000; and Mīris, 47,000.

The natural result of the various changes outlined in the preceding paragraphs is that Hinduism in general, and caste in particular, are much less rigid in Assam than in Bengal. The first Hindu immigrants seem to have entered the valley of the Brahmaputra at a time when the boundary lines between one caste and another were not very clearly defined, and the presence of a large non-Hindu population, sections of

which from time to time attained to sovereignty, made it impossible for them to affect too strict a standard of religious purity. The higher castes are thus somewhat lax in the observance of the ceremonial details of their religion; while castes which in Bengal are of a comparatively low rank enjoy in Assam a much more respectable position. Brāhmans and Kāyasths are found in both valleys, but the most characteristic caste of Assam proper is the Kalitā. Various explanations have been put forward to account for the origin of this caste, which is almost peculiar to Assam, but it is now generally thought that they are the remains of a Hindu colony who settled in the Province at a time when the functional castes were still unknown. The Kalitās are divided into two main subdivisions, Bar and Saru, who do not usually intermarry, and there are various functional subdivisions which occupy a slightly lower position than the Bar Kalitā. The names Kewat and Kaibartta are used more or less indiscriminately for the same caste in Assam. Owing to the comparative scarcity of the higher castes, the cultivating Kewats occupy a higher position in this Province than in Bengal; but some of them have taken to styling themselves Māhisya Vaisya, as they resent the attempt on the part of the Nadiyāls or Doms to assume the name Kaibartta. The Kochs were originally a tribe of Mongolian origin, who were the masters of Lower Assam and North-Eastern Bengal, till overthrown by the Muhammadans and Ahoms about the beginning of the seventeenth century. They are now, in Lower Assam, a caste into which all converts to Hinduism are admitted. In Goālpāra the term Koch has been abandoned for the more honourable title Rājbansi—'men of royal race.' The Sāloi are a respectable caste in Kāmrūp, who are believed to be connected with the Halwais, or confectioners; and the Patiās, most of whom are found in Nowgong, are theoretically mat-makers. Both of these castes have abandoned their traditional occupation and taken to agriculture. Of castes from whose hands water is not taken by Brāhmans, the principal is the Ahom. They were originally a Shan tribe, who entered Assam in the thirteenth century and settled in Sibsāgar District. They overthrew successively the Chutiyā and the Koch, and eventually became masters of the Brahmaputra Valley. But they never colonized Lower Assam, and the majority of the Chutiyās and Ahoms are still found in Sibsāgar and Lakhimpur Districts. In the seventeenth century they were converted to Hinduism, and shortly afterwards the power of the tribe began to decline. The Jugis are theoretically weavers by profession, but most of them have taken to agriculture. The Nadiyāls or Doms are a fishing caste, and in Assam have never performed any of the degrading offices assigned to them in Bengal. They are cleanly in their persons, and great purists in the ceremonies of their religion. The Boriā, or Sūt, are a caste peculiar to the Brahmaputra Valley. They are said to be

the descendants of Brāhman widows and other persons who have contracted alliances not recognized by customary law.

The characteristic castes of the Surmā Valley differ from those in Assam, though many are common to the two valleys. The great cultivating class of Sylhet are the Das (121,000), who often use the prefix Sūdra and Halwā. The Sūdras (46,000) are many of them members of the Das caste; but there is in Sylhet a genuine caste, that has no other name, composed of people who were formerly the slaves of Brāhmans (109,000) and Kāyasths (87,000). The members of the Navasākha, or respectable profession castes, most strongly represented, are the Telis, or oil-pressers (39,000), the Goālās, or cowherds (38,000), the Nāpits, or barbers (32,000), the Baruis, or betel-leaf growers (18,000), the Kumhārs, or potters (27,000), and the Kamārs, or blacksmiths (34,000). The Baidyas (5,000) are theoretically doctors, and socially occupy a position immediately below the Brāhmans. The Shāhās (51,000) are by tradition liquor-sellers, but in Sylhet they are the chief trading caste, and many of them have amassed considerable wealth; in the Brahmaputra Valley they are ordinary cultivators, and Brāhmans take water from their hands. The Namasūdras, or Chandāls (170,000), are a fishing and boating caste.

The foreign castes in Assam most numerous in 1901 were Baurīs (42,000), Bhuiyās (49,000), Bhumij (34,000), Chamārs (44,000), Ghātwāls (22,000), Kurmīs (21,000), Mundās (81,000), Oraons (24,000), and Santāls (78,000). Nearly all of these persons had originally been brought into Assam to work on tea gardens. The following castes are also numerically strong: Kochs (222,000), Rājbansis (120,000), Kalitās (203,000), Nadiyāls (195,000), Ahoms (178,000), Jugis (161,000), Kewats (149,000), and Chutiyās (86,000).

Of the total population of the Province, 3,429,099 persons, or 56 per cent., were returned in 1901 as Hindus, more than half of whom profess the mild tenets of Vaishnavism. This form of Hinduism is especially prevalent in the Assam Valley, where its *gosains*, or principal priests, occupy positions of great influence and dignity. The *gosain* generally lives in a *sattra* or college, surrounded by his *bhokots*, or resident disciples. In some of the smaller *sattras* celibacy is not enforced, but in the larger colleges neither the *gosain* nor the *bhokots* are allowed to marry. The *sattras* are not educational institutions like the Buddhist monasteries of Burma, nor do the inmates wander abroad into the neighbouring villages to solicit alms. The more important *sattras* hold grants of revenue-free land, which in some cases amount to several thousand acres, and all the non-resident disciples make an annual contribution towards their maintenance. The *gosain* of a large *sattra* is the spiritual head of a wealthy and powerful college, and is looked up to as the ultimate authority in religious and social matters by thousands of

villagers, many of whom live miles away. In most of the larger *sattras* the presiding *gosain* is a Brāhman, but in some of the smaller institutions he is a Kalitā or Kāyasth. These priests are the great proselytizing agency in Assam ; they exercise a civilizing influence on the aboriginal tribes, and have always been distinguished by their loyalty to Government and by enlightenment and liberality of thought. A special form of Vaishnavism found in the Assam Valley is the Mahāpurushia faith, founded by a Kāyasth named Sankar Deb about the end of the fifteenth century, which represents a revolt against the pretensions of the Brāhmans and the licentious rites of corrupted forms of Saktism. Its followers pay little attention to caste, are willing to accept a Sūdra as their *gosain*, are uncompromising in their hostility to idols, and worship God, in the form of Krishna, with hymns and prayers only. Sankar Deb himself was a vegetarian ; but he was unable to impose this rule upon his followers, who were for the most part men of low caste, and they are allowed to eat the flesh of wild but not of domesticated animals. The sect has a following of about 400,000, but the returns have to be accepted with a certain degree of caution.

Nearly one-fifth of the Hindu population described themselves as followers of Saktī or Kālī, who represents the procreative force as manifested in the female. The temple of Kāmākhya in Kāmrūp is a special object of veneration to the devotees of this creed, as it is said to cover the place where the pudenda of Saktī fell, when her body was cut in pieces by Vishnu ; but Saktism, as a rule, is not popular with the inhabitants of Assam, and many of the so-called Saktists were merely garden coolies and rough tribesmen, who had not yet learned sufficient self-restraint to abandon meat and liquor. The devotees of Siva, who is the male counterpart of Saktī, are comparatively few in number. Most of them are found in the Surmā Valley. Another small sect remarkable for the peculiarity of its tenets is the Sahaj Bhajan. Each worshipper endeavours to secure salvation by taking a woman as a spiritual guide, but it is said that at their midnight meetings there is much sexual licence under the cloak of religion. It is, however, possible that these charges are merely the calumnies with which a new creed is usually assailed by the supporters of the established order.

The standard form of Hindu temple is a dome-shaped structure enclosing the shrine, approached by a short nave. It is usually built of thin flat bricks, with a fine glaze, and enriched with bas-reliefs ; but there are comparatively few of these masonry buildings in the Province. Almost every village in Assam proper contains, however, a large barn-like structure, called the *namghor*, in which the people assemble for prayer and worship. In the Surmā Valley there are few temples or places of this kind, and the ordinary Hindu performs his devotions in a part of his house specially reserved for that purpose.

About one-fourth of the population of the Province, or 1,581,317 persons, returned themselves as Muhammadans in 1901. Nearly three-fourths of them were found in the District of Sylhet, which was conquered at the end of the fourteenth century by Sikandar Ghāzī, who was largely assisted in his enterprise by the famous Muhammadan *fakīr* Shāh Jalāl. This man was a native of Yemen in Arabia, who had been sent by his uncle to Hindustān with a handful of earth, and orders to settle in the place where the earth was similar to the sample he took with him. The ground of Sylhet proved to be of the quality desired, and Shāh Jalāl settled in the newly conquered territory. A fine mosque, which is held to be of peculiar sanctity, has been built over his tomb, and a monthly grant is allowed by Government for its support. The tombs of the 360 disciples of the *fakīr* are to be seen in almost every portion of the town. Muhammadans are also fairly numerous in Cāchār, which for many years has acted as an outlet for the surplus population of Sylhet, and in Goālpāra, where they form more than a fourth of the population. The Brahmaputra Valley was invaded by the Muhammadans on several occasions, and one general is said to have penetrated as far as Sadiyā; but Goālpāra was the only District which they held for any length of time, and the influences of the faith were not largely felt at the eastern end of the valley. In the hills less than 3 per cent. of the population professed Islām, the majority of whom were working on the railway in North Cāchār, or living in the *tarai* at the foot of the Gāro Hills. Only 2,724 persons were returned as Shiahs, and 47 as members of the strict reforming sect known as Ahl-i-hadīs, or Wahhābis. The remainder, so far as they returned any sect at all, were Sunnis. The Moriās are a small sect of degraded Muhammadans, who are said to be descended from the followers of Turbak, a Pathān who invaded Assam in the sixteenth century, and was there defeated and killed. They were employed by their captors in various capacities, for which they showed themselves to be totally unfitted, and were ultimately made braziers. They are looked down upon by their neighbours, and the number of persons who admit that they are Moriās naturally does not tend to increase. Muhammadan mosques are usually small brick structures, consisting of an open quadrangle with a covered arcade at the west end, but in some of the remoter parts of the Province service is held in a thatched hut.

No less than 1,068,334 persons, or 17 per cent. of the population, still profess those various forms of primitive belief which are usually described as animistic. The main feature of this religion is the desire to propitiate the devils who are ever on the alert to injure man, though most tribes recognize the existence of kindly spirits and the possibility of a future life. The number of unconverted tribesmen living in the Surmā Valley is very small, but in the four lower Districts of the valley

of the Brahmaputra the proportion varies from 31 per cent. in Nowgong to 21 per cent. in Kāmrūp. In Sibsāgar the animistic tribes form only 7 per cent., and in Lakhimpur 5 per cent. of the total population. In the Hill Districts they form 85 per cent. of the whole. The tribesmen have no special preference for their own forms of religion, and take fairly readily to Hinduism in the plains, and to Christianity in the hills. Conversion would, in fact, proceed rapidly, were it not for the natural reluctance of these primitive people to abandon pork, liquor, and the freedom of intercourse between the sexes permitted by their own religion. Apart from Christianity, the only other religious bodies requiring mention are the Buddhists (8,911), the majority of whom are found in Lakhimpur and Sibsāgar, and the Jains (1,797), who are usually Mārwāri merchants from Rājputāna.

The total number of Christians in Assam in 1901 was:—Europeans and allied races, 2,099; Eurasians, 275; natives, 33,595. Between 1891 and 1901 the number of native Christians increased by 128 per cent. The chief proselytizing agency in the Province is the Welsh Presbyterian Mission, whose head-quarters are in the Khāsi and Jaintiā Hills. This mission was started in 1841, and in 1903 gave employment to 36 missionaries, of whom 13 were stationed in the Surmā Valley and 2 in the Lushai Hills. There is no caste system or social prejudice among the Khāsis to act as an obstacle to conversion; they come but little under the influence of Hinduism, and their readiness to accept the Christian faith can be judged from the fact that in 1901 nearly 9 per cent. of the population of the District returned themselves under this head. The Baptist Mission has also met with a large measure of success, the numbers of this sect having risen from 3,767 in 1891 to 10,045 at the last Census. The mission was first started at Sadiyā in Lakhimpur District in 1836, and in 1903 had 21 missionaries. Their main centres are in the Gāro Hills, Goālpāra, Kāmrūp, and Sibsāgar Districts. Both the Anglican and Roman Catholic churches are included in the diocese of Calcutta.

The number of persons in British territory (excluding Manipur) returned under the main religions at the last two enumerations is shown below:—

Religions.		1891.	1901.
Hindus		2,997,072	3,258,522
Animists		928,175	965,027
Musalmāns		1,483,974	1,570,934
Christians	Native	14,762	33,587
	Others	2,082	2,337
Buddhists		7,697	8,766
Others		1,481	2,705

The economic organization of the Province is of a very simple

character, and the great majority of the population are supported by agriculture. In the hills and the Assam Valley there is very little subdivision of function: the ordinary cultivator builds and repairs his own house, makes his own agricultural implements, has his clothes woven at home, and in fact supplies almost all his own simple wants. The occupations returned in 1901 were divided into eight main classes. The number of persons supported by each class and the percentage they form of the total population were as follows: Government service, 34,791, or 0·6 per cent.; agriculture and pasture, 5,172,228, or 84·5 per cent.; personal services, 75,395, or 1·2 per cent.; preparation and supply of material substances, 479,358, or 7·8 per cent.; commerce, transport, and storage, 86,497, or 1·4 per cent.; professions, 84,971, or 1·4 per cent.; unskilled labour other than agricultural, 111,401, or 1·8 per cent.; means of subsistence independent of occupation, 81,702, or 1·3 per cent. The number of actual workers was almost exactly equal to the number of persons who were supported by others. Of the total number of workers, 1,073,776, or 35 per cent., were women, the great majority of whom take an active share in the cultivation of the land, for, though a woman may not touch the plough, she is very frequently employed to transplant paddy seedlings or reap the crop when ripe.

The staple food of the people is boiled rice, eaten with pulse, spices, and fish or vegetable curry. Among the well-to-do, pigeon or duck occasionally takes the place of fish; but fish is a very common article of diet in the plains, and is said to be a substitute for *ghī*, which is not very largely used. Goat's flesh is eaten by Muhammadans and Hindus alike, while venison is always acceptable, and in parts of the Assam Valley by no means rare. The restrictions on the eating of flesh are not so stringent as in Upper India, and even respectable Brāhmans take duck, pigeon, and goat. Fowls (like beef) are debarred to the Hindu, and so are sheep, though in parts of Sylhet ram's flesh is eaten even by the higher castes. An orthodox Brāhman in that District will take food only once between sunrise and sunset, but this rule is not observed in the Assam Valley. Domesticated pork is of course forbidden to both Hindu and Muhammadan, but the lower Hindu castes will sometimes eat wild hog. Tea-drinking is very common, especially in the early morning. Sweetmeats usually consist of powdered grain mixed with milk, sugar, and *ghī*. The hillmen and the aboriginal tribes eat flesh of all kinds, even when nearly putrid. Dog is generally considered a luxury by them, and lizards, snakes, and insects are appreciated, but milk is very seldom taken.

The ordinary form of dress for a villager is a cotton *dhotī* or waist-cloth, with a big shawl or wrapper, and sometimes a cotton coat or waistcoat. Women in Assam wear a petticoat, a scarf tied round the

bust, and a shawl. In the Assam Valley these clothes are generally home-made, and in the case of women, and of the large wraps used in the cold season by men, are frequently of silk. A curious article of dress is a large flat hat, called *jhapi*, made of leaves and split bamboo and decorated with coloured cloth, which serves as a protection against the sun and the rain. These hats are circular in shape, and range from 2 to 4 feet in diameter, but those of the larger size are more often carried than worn. In the Surmā Valley women wear a *sārī*, a piece of cloth about 15 feet long and nearly 4 feet broad; this is fastened round the waist to form a petticoat, and then brought over the head and shoulders so as to cover the rest of the body. Chemises and bodices are also sometimes used. In this part of the Province there is very little home-made cloth. Manchester piece-goods are in great request, and machine-made coats and shirts are largely worn. The dress of the middle classes does not differ materially from that of the ordinary villager, but a superior material is employed, and shirts are usually worn. In the Assam Valley beautiful silk and cotton cloths are woven by the wives and daughters of the well-to-do, and fine embroidered cloths are produced in Manipur. Boots and shoes are the exception, and in their own homes even the richer people wear wooden clogs. Wooden sandals are also used by villagers in the Assam Valley when travelling or working in jungle ground, where there are tufts of sharp-pointed grass. In the hills several fashions are in vogue. Beyond the frontier, some of the Nāgā tribes go absolutely naked, and even in British territory Nāgā men and women are often content with the very minimum of apparel. The state dress of the Khāsis, on the other hand, consists of a silk waistcoat and richly-embroidered tunic, set off with much handsome jewellery; and an Angāmī Nāgā in his war-paint is a distinctly impressive sight.

The house of the ordinary villager consists of three or four small and ill-ventilated rooms, built round three sides of a court-yard. The walls are usually made of reeds plastered over with mud, the roof of thatch supported on bamboos, the floor of mud. In the Assam Valley the materials required for the construction of a house do not, as a rule, cost the proprietor anything but the labour of procuring them, but the houses are small and generally badly built. In the Surmā Valley the villagers take more trouble; the cottages are raised on high plinths, are well thatched, and have an arched roof-tree to resist the storms. Brick houses are very rare, and the dwellings of the middle class are in the same style, but larger and of better quality than the cottage of the peasant. The furniture of the cultivating classes is simple, and consists of a few boxes and wicker-work stools, brass and bell-metal cooking utensils, earthen pots and pans, baskets, and bottles, and in the Assam Valley a loom. The villager sometimes sleeps on a small bamboo

machān or platform, and sometimes on a mat on the floor, but the middle classes have beds, tables, and chairs in their houses. The animistic tribes usually build on piles, the floor being raised a few feet above the ground. The house consists of one long building, divided into cubicles by a few partitions. Among certain tribes this building is enlarged to meet the wants of the growing family, and sometimes as many as sixty persons reside in one barrack.

Hindus burn and Muhammadans bury their dead. Some animistic tribes follow the Hindu custom, unless the death has been due to an infectious disease, when they are afraid of the infection being carried in the smoke of the funeral pyre; others bury, while a few tribes simply throw dead bodies into the jungle. Some tribes preserve the corpses of their wealthier men for several months after death. They are placed in wooden coffins inside the house, and the liquid matter is carried off through a bamboo. The Paithes, who live in the Lushai Hills, smear a greasy preparation over the corpse, which preserves and hardens the skin. It is then dressed in its best clothes, and in the evening is brought outside the house, and rice beer is poured down its throat. This disgusting performance is sometimes continued for several weeks.

Dice, cards, and chess are played by the well-to-do; and the cultivators in the Assam Valley amuse themselves with simple theatrical performances, music, singing, dancing, buffalo and cock-fights, and in places with a game in which two eggs are banged together, a forfeit being paid for the one that is broken. The ordinary Hindu festivals, such as the Holī, Rath Jātra, Janmashtami, Kālī, and Durgā *pūjās*, are observed. Special celebrations are the Bishori *pūjā* in honour of the goddess of snakes and the Kārtik *pūjā* in Sylhet, and the Māgh and Baisākh Bihus in Assam. The Māgh Bihu is the harvest home. The cultivators feast after having gathered in their crops, bathe at dawn, and then warm themselves at bonfires of rice straw, which have been prepared several weeks beforehand, and which form a conspicuous feature in the rural landscape towards the end of December. The Baisākh Bihu, which ushers in the new year, lasts for a week, and is an occasion of some licence. Boys and girls join in songs and dances of a somewhat unrestrained character, and lapses from chastity are considered venial. This festival not unfrequently gives rise to suits for abduction against lovers who have induced the object of their affections to elope with them, instead of paying the usual bride price to the parents of the girl. The anniversaries of the deaths of the two Vaishnavite reformers, Sankar Deb and Mādhab Deb, are also observed by the Assamese. In the Surmā Valley the villagers indulge in boat-races in long canoes, manned by from fifteen to twenty pairs of paddlers, who keep time to the songs of a man who dances in the centre of the vessel and beats a pair of cymbals. The Khāsis are much addicted

to archery competitions, and are very skilful with the bow; and the Nāgās amuse themselves by putting the weight, leaping, and exercises on the horizontal bar.

The best-known game of all is, however, polo, which is supposed by some to have been introduced to European players from Manipur, and which is still played by the natives of that State with the greatest enthusiasm. A good Manipurī pony, though seldom over twelve hands high, has, for its size, remarkable speed, courage, and endurance. There are usually from five to seven players on each side, there are often no goal posts, and no attention is paid to the rules prohibiting crossing, fouling, or reckless use of the stick. The rush of a Manipurī team thus suggests a cavalry regiment practising shock tactics, and were it not for the small size of the ponies serious accidents would frequently occur. The pony's bridle is covered with large brightly-coloured balls of wool, the rider's legs are protected by curious leather shields, and while the upper part of his body is clothed in gay attire, and his calves covered with gaiters, his thighs are almost naked. The general effect is most striking. The men possess a wonderful command over the ball, and hit it from almost any position in any direction.

Hindus of the higher castes usually have two names, one corresponding to the Christian name of Europe, the other a family name. The number of family names is, however, so small that they do not give much clue to the individuality of the bearer. A caste name, such as Sarmā for Brāhmans, Gupta for Baidyas, and Das for all castes other than these two, is sometimes added. Titles, such as Rai, Chowdhury, Mazumdar, Gohain, Phukan, Baruah, are, however, in common use, especially in the Assam Valley. Proper names are often of a grandiloquent character, such as 'Lord of the earth and moon,' 'Delight of women'; but children are sometimes called after the day of the week or the month in which they were born. Women usually bear the names of goddesses or flowers. Among the poorer people, names like Fedela, 'The dirty one,' are sometimes given with the idea of averting the jealousy of the gods. The Khāsis attach the male prefix U and the female prefix Ka to all proper names. Common affixes of place names are *ganj* in the Surmā Valley, which indicates a market; *pur*, a town; and in Assam *garh*, a fort and embankment; *gao*, a village; *dai*, water; and *ranga*, red, referring to the colour of the soil.

Agriculture.

The Province of Assam consists, as has been already mentioned, of two great alluvial plains, surrounded on three sides by mountains. The soil formation thus falls into two main classes: that of the hill tracts, which are being denuded; and that of the valleys, which are being formed by the same process. There is a further distinction between the conditions prevailing in the two valleys, due to the difference in their elevation above sea-level. During

the rainy season there is usually a strong current in the Brahmaputra and the other rivers of the Assam Valley; and where the current is swift it is only the heavier portion of the matter held in suspension—that is, the sand—which is deposited. In the Surmā Valley, where there is very little fall, the rivers are sluggish, and when they overflow enrich the fields with silt. Silt is also deposited in the Assam Valley in slack water away from the main current, and the soil of that Division consists of a mixture of clay and sand in varying proportions, which ranges from pure sand to clay so stiff as to be hardly fit for cultivation.

The land best adapted for the growth of rice, the staple food-crop of the Province, is a deep, soft, clayey loam, which has been rendered light and friable by the action of worms. Where there is too much sand, the soil is too light to retain the water necessary for the development of the crop. Where the clay is too stiff, it is impervious to air and water, and difficult to plough, and the roots of the plant are likely to be choked. The fertility of the soil is also largely affected by the quantity of organic matter it contains. This humus, or vegetable mould, is formed by the decomposition of vegetable matter, and is most abundant in land that has long remained under jungle. It contains nitrogen, which is one of the most important elements of plant food, and is useful alike to clayey and sandy soils. The former it renders less clinging and less liable to bake into hard clods, while to the latter it gives more adhesion and greater capacity to retain water. A further advantage is to be found in its solvent action on the iron in the earth. By this means it tends to check the formation of the hard red pan, which often underlies thin poor soils, and injures the crop by interfering with the growth of the roots. The suitability of land for rice depends, however, chiefly upon its elevation, and its capacity for retaining moisture.

Generally speaking, the country on either side of the Brahmaputra falls into four classes. The first is the *chapari*, or land in the immediate neighbourhood of the river, which is heavily flooded during the rains. It is, as a rule, covered with high grass jungle, which has to be cut down and burned before it can be brought under cultivation; but, when the floods do not rise too soon, it yields excellent crops of *āhu*, or summer rice. The seed is sown in March or April and reaped in June or July, and is followed by a crop of mustard or pulse, which is sown when the river falls in October and November, and gathered about three months later. When the land is first cleared of jungle it is free from weeds, but they spring up with great rapidity in the second and third year of cropping, and it is then abandoned for from eight to ten years to allow the high jungle time to kill them out. Behind the *chapari* comes a belt of low-lying land, in which *bao*, a long-stemmed variety of rice, is grown. It is usually sown in April or May and reaped in November and

December. Summer rice is sometimes mixed with *bao*, in the hope of getting a crop before the river rises. The water drains off slowly from this belt, and the land is left too cold and damp for winter crops. The level of the country then gradually rises above the reach of ordinary floods, and *sāli*, or transplanted winter rice, becomes the staple crop. The grain is sown in nursery beds, the seedlings are transplanted in June or July, when they are about two months old, and the harvest is reaped in November and December. *Sāli* is divided into two main varieties, *bar* and *lahi*. The former gives a heavier yield, but ripens later and requires more water than *lahi*, and is therefore usually planted on lower land. This belt of land is a broad one, containing most of the permanent cultivation and the majority of the agricultural population. Beyond this again comes the submontane tract. The level of the land here is higher, and the fields are often irrigated from hill streams. The chief crop is *sāli*, or a transplanted form of *āhu* known as *kharma*. This land is practically free from all risk of flood, and artificial irrigation renders the harvest particularly secure.

These four belts are not, however, found in all parts of the valley. Very little *bao* is grown in the Districts of Darrang, Sibsāgar, and Lakhimpur; and though, as a rule, *chapari* is found on both sides of the Brahmaputra, there are places where the margin of permanent cultivation comes down almost to the river bank. Sugar-cane is usually planted on high land near the village site in the broad belt of permanent cultivation.

The conditions of the Surmā Valley are somewhat different. There is no *chapari*, and the banks of the rivers are the highest and the most fertile part. In Cāchār and the eastern part of Sylhet the bulk of the land resembles that found in the broad belt of permanent cultivation in Assam, and the staple crops are *sail* and *aus*, which correspond to the *sāli* and *āhu* of the other valley. The western portion of Sylhet becomes one great swamp in the rains, and is fit only for the cultivation of *āman*, a form of long-stemmed rice. A fourth kind of rice called *sailbura* is grown in the large *haors* or basins to which reference has been already made. It is sown at the end of the rains and harvested about May, and gives an exceptionally large yield per acre. Sugar-cane is often grown on low land, and mustard on old high land near the village site, where it gives a poorer out-turn than on the fertile river banks of Assam.

The majority of the hill tribes cultivate on the *jhūm* system. A patch of land is cleared with axe and fire, the soil is hoed up, and the seeds of hill rice, chillies, cotton, millets, gourds, and other vegetables dibbled in among the ashes. The same plot is seldom cropped for more than two or three years in succession. After this time the weeds spring up in great luxuriance, and further cultivation would destroy the roots of

ikra or bamboo jungle, upon the growth of which the land depends for its fertility. *Jhūms* are left fallow for as long a time as possible. The shortest period is four years, but this is generally extended to eight or ten. In the Khāsi Hills rice is grown in terraced and irrigated fields in the valleys, but other crops, such as potatoes and millet, are raised on the bare hill-side. The Tankul and Angāmī country lies too high for the successful cultivation of *jhūm* rice, and there is not sufficient land to permit the people to rely on this system of cultivation. The villages of these tribes are surrounded by admirably constructed terraced rice-fields, built up with stone retaining-walls at different levels, and irrigated by skilfully designed channels, which distribute the water over each step in the series.

The agricultural implements are all of a very primitive character. They include a wooden plough with an iron-tipped share, wooden rakes and mallets, a rough bamboo harrow, sickles, bill-hooks, knives, and baskets. In Assam proper sugar-cane is pressed between two grooved logs of wood, turned by a pole, and the iron mill, though more expeditious and economical, is little used. Winter rice is sown in carefully-manured beds near the homestead, which at the commencement of the rains form brilliant patches of green in the landscape. While the shoots are growing, the cultivator ploughs his fields some four or five times, reducing the soil to a fine puddle of clay, and repairs the low mounds intended to retain the water. In Assam proper the seedlings are planted out in handfuls by the women, who can be seen up to their knees in mud, stooping for hours together under the burning summer sun. The distance at which the clumps are placed depends upon the quality of the soil, varying from 8 inches to 3 feet. As the crop grows, it covers the plain with a rich carpet of green, turning towards the end of the year to a fine yellow. When ripe, the grain is cut off near the head, tied in bundles, and carried, slung from bamboos, to the homestead, where it is threshed out by cattle as occasion requires. *Bao* or *āman* and *āhu* are sown broadcast, but the yield is usually smaller, and the quality of the grain is not so fine. Mustard requires four or five ploughings; and when new land is broken up, the cultivators have to press down the high grass jungle and wait till it is sufficiently withered to catch fire. Sugar-cane is a crop which, though yielding good returns, entails a considerable amount of labour. The land is generally ploughed twice for pulse, but the seed is sometimes sown broadcast over fields that have just yielded a crop of rice. The plants are pulled up when ripe, left to dry for a week or ten days, and brought in at the leisure of the cultivator.

Assam is a purely rural country, with no large towns, and in 1901 no less than 84 per cent. of the population returned agriculture as their means of livelihood. The proportion of agriculturists in the different

Districts was highest in the Gāro, Nāgā, and Lushai Hills, and in Darrang, Nowgong, and Sibsāgar. It was lowest in Kāmrūp and Sylhet, where there were large numbers of fishermen and priests.

The area under different crops in the five upper Districts of the Brahmaputra Valley is returned by the local revenue officials. The figures may be accepted as fairly accurate, but do not, as a rule, include the comparatively small area occupied by tribes not assessed to land revenue. The principal crops raised are rice, pulse, tea, sugar-cane, and rape and mustard. The area under these crops will be found in Table IV, appended to this article; but this table gives a very imperfect idea of the cultivated area of the Province, as it does not include the Hill Districts, Sylhet, and Goālpāra, for the greater part of which there are no returns, or Cāchār, the figures for which have become available only in recent years. As a matter of fact, there are probably at least four million acres under rice in Assam, and over a quarter of a million under mustard.

Wheat is sown in Goālpāra, where it is believed that there are about 10,000 acres under this crop; elsewhere both wheat and barley are raised only in small patches by foreigners. Jute is grown on a commercial scale in Goālpāra and Sylhet, and is gradually extending into Kāmrūp; but in the rest of the Province the villagers plant only enough to supply the home demand. The estimated area under jute in 1903-4 was 39,000 acres. Linseed is largely grown in Sylhet, but is not common elsewhere. Garden crops include tobacco, several kinds of plantain, vegetables, *pān* or betel-leaf, the areca palm, pepper, and various kinds of spices. In the Surmā Valley *pān* is grown in the orthodox way by Baruis in neatly fenced gardens, completely covered with the tendrils of the plant; but in Assam it is usually trained up the stem of the areca palm. Plantains of different kinds are found near every house; and in the Assam Valley the ash is largely used as a substitute for salt, the people still clinging to the customs which prevailed in the days of native rule, when mineral salt could not easily be obtained. Pepper is mentioned in Welsh's Report on Assam, in 1794, as a plant that throve well, but, though the cultivation would be most lucrative, only a small quantity is grown. The Khāsis export potatoes, oranges, pineapples, and the leaves of the bay-tree; and cotton is grown by most of the hill tribes. It has a very short and somewhat harsh staple, but it is useful to mix with wool and the proportion of seed is unusually low.

In Cāchār the rice crop is usually distributed under the three chief varieties of the grain in the following proportions: *sail* or *sāli*, 70 per cent.; *aus* or *āhu*, 22 per cent.; *āman* or *bao*, 8 per cent. For the Assam Valley the proportion is *sāli*, 70 per cent.; *āhu*, 22 per cent.; and *bao*, 8 per cent. *Āhu* and *bao* are grown chiefly in Lower Assam; in Darrang, Sibsāgar, and Lakhimpur there is not much *āhu* and hardly

any *bao*. The normal yield of *sāli* rice is about 9 cwt. of cleaned grain per acre, and that of *āhu* and *bao* about a cwt. less. Mustard gives about 5 cwt. of seed, and sugar-cane about a ton of raw molasses per acre. These figures represent only a rough general standard; the actual crop obtained is often considerably in excess or defect of the mean.

Cow-dung and the sweepings of the courtyard are used to manure garden crops, sugar-cane, jute, and the nurseries in which rice seedlings are grown; and in the more congested parts of the Province cow-dung is sometimes spread on the rice-fields themselves. The *chapari* and the shifting cultivation of the hill tribes are enriched by the ashes of the jungle with which the land was originally covered. Exhausted tea land is top-dressed with richer soil, and on some gardens the use of oilcake and farm-yard manure is coming into favour. The Khāsis fully appreciate the value of cow-dung as a fertilizer, but all over the Province immense quantities of this excellent manure are allowed to go to waste. There is practically no rotation of crops, apart from the system under which summer rice is followed by pulse or mustard, while pulse is usually sown on the rice-seedling bed, as it is thought to benefit the soil.

It is impossible to obtain accurate figures showing the extension of cultivation in the Province as a whole. No statistics are available for the hills, or the permanently settled estates of Sylhet and Goālpāra, and there is a considerable difference between the conditions prevailing in the two valleys. In Assam proper and in the Eastern Duārs the extension of cultivation is best measured by the growth of the area settled at full rates, excluding the land held by planters. The area so settled in 1881–2 was 1,335,000 acres. During the next ten years there was an increase of 15 per cent., which was, however, partly due to the operations of the cadestral survey, and to greater strictness in the measurement of land. Then ensued a period of extreme depression in Lower and Central Assam, and by 1902–3 the area settled in this way had increased by only 63,000 acres, or 4 per cent. more than the total for 1891–2. This slow rate of increase, in a Division where there are enormous tracts of cultivable waste available for settlement, was due to exceptional mortality which seriously reduced the indigenous population, and to the damage done by the earthquake of 1897, which interfered with the natural drainage in Lower Assam.

The settled area of Cāchār has increased rapidly since it came under British rule. In 1843, when the first settlement was made, the area covered by the operations was only 97,900 acres. In 1903 the settled area of the District was 607,000 acres. The cultivated area held on ordinary tenure increased by 24 per cent. between 1883–4 and 1896–7. It is impossible to ascertain the extent to which cultivation has extended in Sylhet District as a whole, but in the Jaintiā *parganas* the cropped

area increased by 22 per cent. during the currency of the last settlement, which was for a period of fifteen years.

The great obstacle to the extension of cultivation is the absence of a labouring class. In the Surmā Valley, Kāmrūp, and Goālpāra agricultural labourers are extremely scarce, and in Central and Upper Assam they are practically non-existent. The climate of the country in the rains is not calculated to stimulate the inhabitants to prolonged physical exertion; and ryots, who are compelled to plough, plant, and reap with their own hands, are not likely to cultivate more land than is absolutely necessary for their maintenance.

The villagers usually select the best heads of rice for seed grain, but are not very prompt to adopt new varieties. The cultivation of jute on the commercial scale is slowly spreading up the Assam Valley, and the *ras* and *balam* varieties of rice have recently been tried. Potatoes were introduced into the Khāsi Hills by Mr. Scott in 1830, and are now extensively cultivated in that District. Of recent years the plants have been attacked by disease, but fresh varieties, imported by Government, have been much appreciated by the villagers. An experimental farm is maintained near Shillong, and scientific farming has been undertaken on a small scale by Europeans and Bengalis in Darrang. Efforts have been made by the Agricultural department from time to time to introduce new and improved varieties of seed, but the results produced have been inconsiderable. In 1903 a garden of European fruit trees was opened near Shillong, as the Khāsis can be relied upon to adopt without delay any forms of fruit culture that seem likely to prove remunerative.

Generally speaking, there is not much serious indebtedness among the cultivators of the Province, and the creditors themselves are often agriculturists. In Assam there is no rich upper or middle class, and few natives other than the Mārwāris are possessed of any capital. The rate of interest is in consequence extremely high, varying from $37\frac{1}{2}$ to 75 per cent. per annum. In parts of the Assam Valley it is the custom for the poorer villagers to take advances from traders on the standing crop, which is subsequently sold at a price below that ruling in the open market. This is especially the case with mustard, which cannot always be removed till the rivers rise in the rains. In the Surmā Valley the producer often deals direct with the trader from Bengal, and the practice of giving advances is not so common. In Sylhet it is said that the indebtedness of the cultivators is increasing. New wants have arisen, but the villagers do not care to make the additional exertions required to provide the means to gratify them. Wages, however, still rule high, so that there cannot be much poverty, and it is seldom necessary for Government to make loans to agriculturists. The total amount so advanced in 1903-4 was less than Rs. 24,000.

The cattle of Assam are a peculiarly degenerate breed. Their degeneracy is largely due to a complete disregard of all the laws of breeding, to overwork, and to absolute neglect. The Valley of the Brahmaputra is exceptionally well supplied with grazing-grounds, and there are few places even in the more densely settled tracts where pasture cannot be obtained within 5 miles of the village site. The grazing near the village is, however, usually poor, and far inferior to the rich grass that grows in the cold season on the marshes that fringe the banks of the Brahmaputra and its tributaries. Where grazing is not readily obtainable, rice straw is used for fodder. In the Surmā Valley the *haors*, or great depressions, to which reference has been already made, afford excellent grazing in the cold season, but during the rains the cattle are almost entirely stall-fed on straw, or on grass dragged from the bottom of the flooded tracts. The villagers pay very little attention to the comfort of their animals, and their condition is not much better than that of the cattle in Assam proper. In the hills the cattle, though small, are fat and sturdy, and, where milked, give a small but very rich supply. The buffaloes in the valley of the Brahmaputra are particularly fine animals, but they have been largely supplemented by the smaller breed imported from Bengal. There is no indigenous breed of sheep, or, except in Manipur, of ponies. The Manipurī pony is a very hardy little animal, but unfortunately the breed has nearly died out. Cart-bullocks are imported from Upper India, and ponies and sheep from Bhutān. The average prices of farm stock are: for a buffalo, Rs. 50 to Rs. 70; for a plough bullock, Rs. 15 to Rs. 25; for a cow, Rs. 8 to Rs. 15; and for a goat, Rs. 2–8 to Rs. 4. Serious loss is caused by rinderpest, foot-and-mouth disease, diarrhoea and dysentery, and other forms of cattle disease. There is only one veterinary surgeon in the Province, who has been engaged by the local boards of Sibsāgar District.

No irrigation works have been constructed by Government, and no distinction has hitherto been drawn by the Agricultural department or the Settlement Officer between irrigated and unirrigated land. Irrigation is, however, freely resorted to by the Kachāris and Mechs, who live near the foot of the Himālayas in the Assam Valley. The villagers combine to construct small channels, sometimes of considerable length, through which they convey the water of the hill streams to their fields. The abundance and certainty of the crop fully repay them for the labour expended on the work. In Sylhet the water in the cold season is dammed up in the lowest part of the *haors* and thence diverted on to the *boro* rice crop. Mention has already been made of the irrigation works of the Khāsis and Angāmī Nāgās. In normal years, however, the rainfall in every part of the Province is so abundant that the crops seldom suffer from want of moisture, and the chief danger

to cultivation arises from flood. The system of forced labour which prevailed under the Ahom Rājās enabled them to construct embankments along the Brahmaputra and many of its tributaries, some of which are still kept in repair. These works were especially numerous in Sibsāgar District in the neighbourhood of the Ahom capital, where the country was protected from the floods of the Brahmaputra, the Disāng, the Dikho, the Dihing, and the Darikā. A considerable sum of money has already been expended by the British Government on the maintenance of these embankments, and a scheme is under consideration for the reclamation of a large area now exposed to flood. Raised roads along the banks of rivers are also common in Lower Assam.

From the commercial point of view tea is the most important crop raised in Assam. The first discovery of the tea-plant growing wild in Upper Assam, in 1821, is generally assigned to Mr. Robert Bruce, who had proceeded thither on a mercantile exploration. The country then formed part of the Burmese dominions. But the first Burmese War shortly afterwards broke out; and a brother of the discoverer, having been appointed in 1826 to the command of a flotilla of gunboats, followed up the subject, and obtained several hundred plants and a quantity of seed. Some specimens were ultimately forwarded to the Superintendent of the Botanic Gardens at Calcutta. In 1832 Captain Jenkins was deputed by Lord William Bentinck, the Governor-General, to report upon the resources of Assam, and the tea-plant was specially brought to his notice by Mr. Bruce. In 1834 Lord William Bentinck recorded a minute, stating that his attention had been called to the subject previous to his having left England, and he appointed a committee to prosecute inquiries, and to promote the cultivation of the plant. Communications were opened with China with a view to obtain fresh plants and seeds; and a deputation, composed of gentlemen versed in botanical studies, was dispatched to Assam. Seed was obtained from China; but it was ascertained that the tea-plant was indigenous in Assam, and might be multiplied to any extent. Another result of the Chinese mission, the procuring of persons skilled in the cultivation and manufacture of black tea, was of more material benefit. Subsequently, under Lord Auckland, a further supply of Chinese cultivators and manufacturers was obtained, who were well acquainted with the processes necessary for the production of green tea. The experimental introduction of tea-planting into Assam was undertaken by Government. In 1835 the first tea garden was opened at Lakhimpur. In 1838 the first twelve chests of tea from Assam were received in England. They had been injured in some degree on the passage; but on samples being submitted to brokers, the reports were highly favourable. It was, however, the intention of Government not to carry on the trade, but to

resign it to private enterprise as soon as the experimental cultivation proved successful. Mercantile associations for the planting and manufacture of tea in Assam began to be formed in 1839; and in 1840 Government made over its experimental establishment to the Assam Tea Company. In 1851 the crop of this company was estimated at 280,000 pounds. In 1854 gardens were opened in Darrang and Kāmrūp; and in 1855 the plant was discovered growing wild in Cāchār. During the next ten years, capital flowed into the business from all quarters. Land was recklessly taken up, to be sold to speculators in England for extravagant sums; and tea-growing for a time fell into the hands of stockjobbers and bubble companies. The crash came in 1866; and for the next few years this promising industry lay in a condition of extreme depression.

About 1869, matters began to amend, and during the last thirty years there has been a great development of the industry. The returns for 1871 showed (in round figures) that 11,000,000 pounds of tea were manufactured in the Province. For 1881 the figures were 37,000,000 pounds; for 1891, 90,000,000 pounds; and for 1900, 141,000,000 pounds. The supply had by this time begun to show signs of exceeding the demand, and attempts were made to restrict the output by the introduction of a system of finer plucking. This was, however, but a temporary check, and in 1903 the output exceeded 145,000,000 pounds. There were in that year 764 gardens, which gave employment to 846 Europeans and 409,000 natives. The average out-turn was 445 pounds per acre, and the crop was valued at wholesale prices in Calcutta at more than 3½ millions sterling. The capital invested in tea is probably about £30 for every acre under cultivation; and as 338,000 acres were planted out in 1903, the capital value of the gardens in Assam may be estimated at nearly 10¼ millions sterling[1]. About four-fifths of the capital employed by companies is owned by companies whose head offices are situated in England.

The want of labour has always been one of the most serious obstacles to the development of the industry. The mass of the population of the Province are above the necessity of working for wages, and nearly all the coolies employed on the plantations have to be imported from other parts of India. Assam is, however, unpopular among the labouring classes; the journey from the recruiting districts is troublesome and expensive, the class of persons capable of working successfully in the damp climate of the Province is limited, and of recent years the supply of labour available has not been sufficient to satisfy the

[1] A considerable proportion of this tea property is held by private owners. The capital value of gardens owned by public companies appears to be about £40 per acre, and this estimate, if applied to the total acreage, would show a capital value of 13½ millions sterling.

requirements of the planters. Special Acts have been passed to regulate the relations between the employers and their labour force. Careful provision is made for the welfare of the cooly. He is housed in neat and comfortable lines; he is provided with an excellent water-supply, generally drawn from masonry wells; and when sick he is cared for in a comfortable hospital by a native doctor working under the supervision of a European medical man. The provision of all these comforts and the importation of the labourers themselves cost large sums of money, which no one would be willing to expend without some guarantee that the coolies when imported would consent to remain on the plantation. This protection is afforded by the law, which lays down that a labourer, provided that he is well treated, must not leave the garden to which he is indentured before the expiry of his contract, unless he chooses to redeem it by a money payment. During the ten years ending with June 30, 1903, the total number of persons brought up to the tea gardens was 543,800.

The land best suited for the plant in the Brahmaputra Valley is the virgin soil of the dense forests at the foot of the hills, where the climate is hot and moist. In the Surmā Valley the most productive gardens are those planted on the low ranges of hills in the south of Sylhet District, or on reclaimed marsh land. The yield in the Surmā Valley is higher than in Assam proper, but the cost of production and the price obtained for the manufactured tea are alike lower. Indigenous seed gives the best results, and after this a hybrid of indigenous and China. It is many years since China seed was planted out in new clearances, and considerable areas covered by this plant have been abandoned. The most important tea Districts and their area under the plant in 1903 were: Sibsāgar, 78,500 acres; Sylhet, 73,500 acres; Lakhimpur, 69,300 acres; and Cāchār, 60,000 acres.

The following is a short account of the system of cultivation and manufacture usually followed. The seed is allowed to germinate before being sown in carefully-selected nursery beds. When the plants are about 12 inches high, they are planted out at distances of from 4 to 5 feet apart. As the bush grows it is pruned, in order to remove decayed or injured wood, to encourage the production of new shoots, and to form as large a surface for the latter purpose as possible. The wild tea-tree grows to as much as 50 feet in height, whereas a well-pruned bush does not exceed 3 or 4 feet. When the plant is about three years old it is fit for plucking. The usual practice is to pick off the top of each young shoot, removing either two or three leaves and the bud. The shoot then germinates again, and the plant thus yields eleven or twelve 'flushes,' as they are called, during the season.

When the leaf has been taken to the tea-house it is spread out in thin layers and allowed to wither, and then placed in the rolling machines.

The object of rolling is to break up the cellular matter and liberate the juices, and to give a twist to the leaf. After the leaf has been rolled, it is spread out in a cool room to allow oxidation to take place. As soon as this process is complete, it is placed in the firing machines until the last trace of moisture has been expelled and the tea is crisp to the touch. It is then sifted, sorted, fired again, and finally packed in lead-lined boxes while still warm.

Rents, wages, and prices.

In most of the Districts of Assam the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goālpāra and of the more densely populated portions of Sylhet was, however, included in the permanent settlement of Bengal; and the system of land tenure in Cāchār, and the existence of large estates on privileged rates of revenue in Kāmrūp, have tended to produce a tenant class, which at the last Census amounted to more than one-third of the total number of persons supported by agriculture. The amount of waste land still available in the Province is, however, so enormous, that there is little risk of landlords exacting too large a proportion of the profits of the soil, and Sylhet and Goālpāra are the only two Districts in which a tenancy law (Bengal Act VIII of 1869) is in force. In Sylhet, the rents charged vary from Rs. 12 to 12 annas for an acre of rice land, but the ordinary rate is about Rs. 3. There is a certain amount of competition among the cultivators to obtain land; but if the owner takes advantage of their necessities to raise the rates to an unreasonable pitch, he experiences great difficulty in realizing the demand. In Goālpāra, which is very sparsely peopled, rents vary from Rs. 6 to 12 annas an acre, the average rent paid by the cultivators for an acre of rice land being between Rs. 2 and Rs. 3. In Assam proper there is very little subletting, except in Kāmrūp. The rent usually charged is the amount assessed by Government at full rates on land of a similar class, but occasionally it is as much as Rs. 6 for an acre of good rice land. In Upper Assam rents of Rs. 9 an acre are sometimes paid for rice-fields which are exceptionally fertile or have some special advantages of site; but the total area sublet is small, and in a large number of cases the tenant merely pays the Government revenue assessed upon the holding. In Cāchār the average rent is about Rs. 6 per acre, varying from Rs. 7–8 to Rs. 4–8.

In place of cash rent the landlord occasionally receives a portion of the produce. In Sylhet the amount demanded is usually $3\frac{1}{4}$ cwt. of unhusked rice per acre, but tenants prefer, as a rule, to pay in cash. In Assam proper the standard form of produce rent is the *adhi*, or half-share system. The owner of the land usually gives half the seed and pays the revenue; the tenant, as a rule, does the actual cultivation, but the crop can be divided at any stage, according to the terms of the

agreement. The tenant's responsibilities sometimes cease when the land has been reduced to puddle, and the landlord has to transplant his seedlings and reap, carry, and thresh his share of the crop. At the other extreme come the cases where the tenant is required to thresh the grain before it is divided.

Over the greater part of the Province, the supply of local labour is extremely limited; and although in most Districts the wages of unskilled labour are said to be 6 annas a day, it would be impossible to procure any considerable body of persons even for a larger sum. Hired labour is not much used for cultivation; but when a labourer is employed he receives from 4 to 5 annas a day, grain being often given in lieu of cash. In Lower Assam it is usually the practice to give a servant a large advance, which is gradually worked off; but in some cases the work done is set against the interest of the loan, so that the debt itself is never liquidated, and the debtor cannot succeed in freeing himself from his obligations. It is, however, to the interest of the employer to treat his servants well, as he has little hope of recovering the loan if they choose to leave him, and they are generally well fed and clothed, and treated almost as members of the family. In Sylhet, the prejudice against working for hire is not so strong as in Assam proper, where the feeling appears to be partly due to a revulsion from the system of forced labour, which prevailed under the Ahom Rājās. The ordinary wage paid to farm-labourers is 4 annas a day, but at harvest time they often receive double that sum. Assam, however, practically depends for its labour supply upon other parts of India. Railways are built, roads are made, and gardens are worked by imported coolies. Male coolies on gardens usually earn from Rs. 4 to Rs. 5 a month, and women about a rupee less; but they receive in addition substantial concessions in the shape of houses, water-supply, and medical comforts. Artisans are usually foreigners, and are said to earn from Rs. 15 to Rs. 30 a month.

Prices in Assam are still liable to strongly marked fluctuations, and vary considerably in different parts of the Province. As a rule, they range higher in Upper Assam, where there is a large foreign population to be fed, but are fairly low in Lower Assam and Sylhet. Since 1893, there has been a general tendency towards a rise, due partly to bad harvests in the Province, partly to famine in other parts of India, and partly to a large increase in the foreign population. In good seasons, however, rice is still by no means dear. In 1899 and 1900 the average price for the Province was nearly 15 seers for a rupee (= about 45 lb. for 2 shillings), as compared with an average for the six years ending with 1879 of $13\frac{1}{2}$ seers (= about $40\frac{1}{2}$ lb. for 2 shillings). Such extensions of cultivation as have taken place do not tend to reduce the price of rice, as their effect is more than counterbalanced by

the increase in the foreign population. The same cause has, to a great extent, nullified the effect produced by the improvement of communications, though in 1900, when there was a bad harvest in Cāchār, the stringency was relieved by the importation of large stocks of grain by the Assam-Bengal Railway. Generally speaking, the chief characteristic of Assam is sharp variations from year to year and also from place to place, a distance of a few miles being sometimes enough to double the price of grain. The average number of seers of rice to be purchased for a rupee during the five years ending with 1901 were: in Sylhet, 13 (= about 39 lb. for 2 shillings); in Kāmrūp, 12 (= about 36 lb. for 2 shillings); and in Lakhimpur, 10½ (= about 31½ lb. for 2 shillings). These five years include two when the harvest was bad, and two when it was distinctly good, and can thus be taken as fairly typical of present rates. Averages for earlier years for the Province will be found in Table V, appended to this article.

The ordinary Assamese peasant usually wears home-made articles of dress; the actual cash cost is small, and a woman could probably dress fairly well on Rs. 10 and a man on Rs. 5 per annum. The price of silk clothing is of course considerably higher. A Government orderly spends from Rs. 4 to Rs. 5 a month on his food, including oil, tobacco, spices, salt, and fish. A clerk who shares expenses with one or two friends need not spend more than Rs. 10 a month on food, including a share of the servants' wages, while the messing charge at the Hindu Hotel at Gauhāti is only Rs. 6 a month. The villagers can, as a rule, obtain nearly all the materials required for their houses free of charge; but if payment must be made, a house costs from Rs. 25 to Rs. 50 to construct.

The material condition of the people is satisfactory. There is not much serious debt, the great mass of the population are above the necessity of working for daily wages, and the number of people who are in actual want is very small. In Upper Assam silk might almost be described as the everyday attire of the women, and there are few houses in which gold ornaments cannot be found. The standard of comfort is not high; but, on the other hand, the villagers are able to satisfy their simple wants with the minimum of toil and trouble. The condition of the clerical class is not so satisfactory, and those who have no land sometimes find difficulty in suiting their expenditure to their income. The class of landless day-labourers is very poorly represented in Assam; and a large number of those who returned themselves under this head at the Census were the younger sons of cultivating families, who take service for short periods in order to earn a little ready money. Their manner of life does not materially differ from that of the poor cultivator, and the two classes merge into one another.

As might be expected from the character of its surface and climate, the area of forest in Assam is very extensive. Government forests are divided into two classes, 'reserved' and 'unclassed state forests,' the latter being the term applied to all land at the disposal of the state, although a very large proportion of this is bare of timber. On June 30, 1904, the area of the Reserves was 3,778 square miles, and of the Unclassed state forests 18,509 square miles, excluding most of the Government waste in the Khāsi and Jaintiā, Lushai, and Nāgā Hills.

Forests.

The 'reserved' forests of Upper and Central Assam have not been thoroughly explored, and it is possible that they include tracts in which the tree growth is of an inferior character; but the area of Government waste is so large that the need for disforestation has not yet arisen. In the Surmā Valley the conditions are different. There is a keen demand for land for cultivation, and the people are beginning to press upon the soil. To meet this demand, 28 square miles were recently disforested in Cāchār and 67 square miles in Sylhet, as the land contained little valuable timber. In the hills there is less good forest than might be expected, though there is no lack of wooded country. The habits of the hill races do not permit the growth of valuable timber, except in isolated spots to which their shifting cultivation has not extended; and this cultivation and forest fires have denuded the interior of the hills, where the people chiefly live. The most valuable forests are those of Goālpāra, where a large area is covered with *sāl* (*Shorea robusta*). This tree is also found in the Gāro Hills, Kāmrūp, Nowgong, and Darrang.

Outside Goālpāra and Sylhet, all Districts contain extensive areas of mixed and evergreen forest. Here, besides *sāl*, the most valuable timber trees are *tita sapa* (*Michelia Champaca*), *jarul* or *ajhar* (*Lagerstroemia Flos reginae*), *nahor* (*Mesua ferrea*), *sam* (*Artocarpus Chaplasha*), *gomari* (*Gmelina arborea*), *khair* (*Acacia Catechu*), *sissu* (*Dalbergia Sissoo*), and *gunserai* (*Cinnamomum glanduliferum*). *Nahor* does not grow in the western end of the Assam Valley, though common in the evergreen forests of the Gāro and Khāsi Hills; and *sissu* is not found east of the Manās river.

The Goālpāra forests were formerly overworked, under a wasteful system of levying royalty on the number of axes employed; and when they came under regular management the stock of exploitable timber was found to be nearly exhausted, though there was still a large supply of young trees. A regular working-plan has now been introduced. Permits are issued to private persons to fell trees, and a certain quantity of timber is extracted by departmental agency. The forests are situated in the north of the District, and some difficulty is experienced in bringing the logs to market, as the rivers are suitable

for transport only at certain seasons of the year. This difficulty has, to some extent, been overcome by the purchase of a portable tramway 6 miles in length. There is also a considerable trade in timber from the permanently settled estates of the District, which lie along both sides of the Brahmaputra, and are thus more favourably situated for purposes of export. The *sāl* forests of the Gāro Hills are valuable, but inaccessible, and it has hitherto been found impossible to work them at a profit on a commercial scale; but there is a considerable trade in canoes hollowed out from large trees which are floated down the Someswari river into Bengal.

In other Districts the only trees of importance as articles of export are *sāl*, *sam*, and *ajhar*, which are floated down the Brahmaputra into Bengal, and from Cāchār into Sylhet, and are chiefly used for boat-building. The exploitation of the Cāchār forests for the service of Sylhet has always been active, and is extending, while that of the forests in Goālpāra and Kāmrūp does not show any marked advance. The upper part of the Assam Valley is remote from any market, and its Reserves are hardly touched. Such trade as exists is chiefly in large trees, which are hollowed out and converted into canoes, but of recent years the Assam-Bengal Railway Company have obtained their sleepers from the Nāmbar Reserve. *Simul* (*Bombax malabaricum*) and other kinds of soft wood are largely used in both valleys for the manufacture of tea boxes.

In the Assam Valley trees extracted for sale are felled under a permit specifying their number and name. In Cāchār and Sylhet permits are issued without specifying the quantity or nature of the timber, and royalty is paid at check stations on the river. The trees selected are usually felled early in the year, and the trunk is cut into logs from 6 to 7 feet in length, which are carefully dressed with the axe. They are then rolled along to river banks, where they remain till floating is possible, which is usually near the close of the rains, when no danger from flood is anticipated. Where large logs are extracted, elephants are employed to drag them to stacking stations. The heavier kinds of timber, such as *sāl* and *nahor*, are brought down attached to the sides of canoes. All persons holding land direct from Government are permitted to remove from Unclassed state forests, without payment, inferior kinds of timber, bamboos, and other forest produce sufficient for their own requirements. The ordinary royalty is levied on forest produce removed for sale. Free grazing is also allowed in Unclassed state forests to all cattle that are not kept for dairy or breeding purposes or for sale. The area of Government waste is so extensive that the villagers have no difficulty in satisfying all their wants, and few causes of friction arise. An officer of the Forest department is stationed in nearly every District, who acts as the Deputy-Commissioner's assistant

in forest matters. The management of Unclassed state forests in the Assam Valley is in the immediate charge of the subordinate revenue officers, who issue permits for the removal of forest produce. In the Surmā Valley it is entrusted to the subordinate officers of the Forest department. Attempts to protect the forest from fire are restricted to 'reserved' areas and, generally speaking, to forests of *sāl* and other deciduous trees. In 1903–4 special measures were taken with regard to 996·5 square miles, all but 5·3 square miles of which were successfully protected at a cost of Rs. 7,737. In addition, 196 square miles were partially protected; no fires occurred in this area during the year.

The most important minor products are bamboos, canes, reeds, thatching-grass, lac, and rubber. The rubber tree (*Ficus elastica*) is indigenous in Darrang, Nowgong, and Lakhimpur Districts, but it has been, to a great extent, killed out by excessive and improper tapping. Duty is levied on rubber collected in Government forests, as well as on that brought into Assam from beyond the frontier. The total amount realized on account of rubber in 1901 was Rs. 93,000. Artificial plantations of *Ficus elastica* have been started at Kulsi in Kāmrūp and at CHARDUĀR in the north of Darrang. Opinions still differ as to the comparative advantages of dense and sparse planting; but in the Kulsī plantation, where there are as many as twenty-seven trees to the acre, the average yield per tree exceeds one pound of rubber.

Lac is not only collected from the forests, but a considerable quantity is cultivated by artificial propagation. The chief seat of the industry is in Kāmrūp, the Khāsi and Jaintiā, and the Gāro Hills. The lac insect is reared on several species of the *Ficus* family, and the bulk of the produce is exported in the form of stick lac: that is, the small twigs surrounded by deposits of translucent orange yellow gum in which the insect is embedded. Occasionally the gummy matter is scraped from the twigs and separated from the dead bodies of the insects, which are strained off and sold as red dye. The gum is then melted, cleaned, and sold as shellac or button lac.

The financial results of the Forest department during the past twenty-three years are shown below:—

	Revenue.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
Average for 1881–90	2,33,487	1,99,488	33,999
" " 1891–1900	4,27,610	2,96,557	1,31,053
1900–1	5,63,400	3,42,963	2,20,437
1903–4	6,76,944	4,51,887	2,25,057

The only minerals in Assam worked on a commercial scale are coal, limestone, and petroleum oil. The most extensive coal measures are those to the south of Lakhimpur and Sibsāgar Districts, which stretch

for a distance of about 110 miles along the north-west face of the Nāgā Hills. There are five separate fields, which, running from east to west, are named the Mākum, Jaipur, Nāzirā, Jhānzi, and Disai. The Mākum fields were leased to the Assam Railways and Trading Company in 1881, and a railway was constructed from the Brahmaputra at Dibrugarh to the coal measures on the Dihing. These measures consist of beds of alternating shales, coal, and sandstones. There are altogether five mines worked by the company, which in 1903 employed 1,238 men under the supervision of 9 Europeans. No labour is obtainable locally, and the labour force has to be imported from other parts of India. The ordinary rate of wages is Rs. 7 a month for a man and Rs. 6 for a woman. Work is carried on in galleries run into the side of the cliff, the system employed being that known as the 'square or panel.' The bulk of the coal is taken by the India General and Rivers Steam Navigation Companies for use on their steamers, and a small quantity is sold locally to tea gardens; very little goes to Calcutta. The coal is fairly hard and compact, but after extraction and exposure to the air it breaks up into small pieces. The capital invested in these collieries in 1903 was £357,000. The total output in that year was 239,000 tons, as compared with 147,000 tons in 1891. Small quantities of coal have been extracted from the fields to the south of Sibsāgar District by the Assam and Singlo Companies for use in their own factories, but not for sale. Coal has also been found in the Gāro and the Khāsi and Jaintiā Hills. The deposits in the Gāro Hills are of Cretaceous origin. The principal fields are at Umblay, Rongrengiri, and Darangiri; and for the last-mentioned field a syndicate has taken out a prospecting licence. Cretaceous coal has been found in the Khāsi Hills near Maoflang, about 20 miles south of Shillong, and at Lāngrin, on the Jādukāta river. The Maoflang field is worked in a primitive way by the villagers for the supply of the Shillong station. Deposits of Tertiary coal have been found in the Nummulitic limestone of the Southern Khāsi Hills at Cherrapunji, Lākādong, Thanjinath, Lynkerdem, Maolong, and Mustoh. The Maolong field, which is estimated to contain 15,000,000 tons of coal, has lately been taken on lease by a company. Coal-beds have recently been discovered in the vicinity of the Shillong-Gauhāti road about 11 miles north of Shillong; and there are deposits at Langlei and on the Nāmbar river in the Mīkīr Hills, but the coal is of poor quality and would hardly pay to work.

Mines and minerals.

Next in importance to coal are the vast stores of limestone which exist on the southern face of the Khāsi and Jaintiā Hills. It is found from the exit of the Someswari river in the Gāro Hills to that of the Hāri river in Jaintiā, but can be commercially worked only where special facilities exist for its transport from the quarries to the kiln.

There are altogether thirty-four tracts which are treated as quarries in the Khāsi and Jaintiā Hills, one in Sylhet, and one in the Gāro Hills. The most important are those situated on the Jādukāta and Panātīrtha rivers, which debouch near Laur in Sylhet, the Dwārā quarries to the east of these, the Shellā quarries on the Bogāpāni, the quarries which lie immediately under Cherrapunji, and the Utma quarries a little to the east on an affluent of the Piyain. The earthquake of 1897 added considerably to the difficulties that had been previously experienced in transporting the stone to a part of the Surmā river navigable by steamers, and in 1903 only eight quarries were working. The principals are private individuals, the actual quarrymen Khāsis and other local labourers, and no information is available with regard to either the capital invested or the rate of wages paid. The total output in 1903 was 88,675 tons. Limestone is also found in the Mishmi and Mīkīr Hills, and in the bed of the Doigrung, a tributary of the Dhansiri, a few miles south of Golāghāt.

Petroleum is worked only on the Mākum fields in Lakhimpur. As early as 1868 a considerable amount of oil was extracted, but no attempt was made to convert the raw product till a small experimental refinery was erected in 1893. In April, 1899, the Assam Oil Company was formed with a capital of £310,000, and a large refinery was erected at Digboi, which in 1903 gave employment to 10 Europeans and 509 natives. In all, 42 wells have been sunk, of which 22 have been abandoned. They vary in depth from 600 to 1,833 feet. The most productive well is said to yield about 50,000 gallons a month. The oil is a crude petroleum, rich in paraffin; and the chief products are light naphthas, kerosene, and wax. The total output in 1903 was 63 tons of candles, 573 tons of paraffin wax, 1,200,000 gallons of kerosene oil, and 89,000 gallons of other oil. The oil finds a ready sale locally, but most of the wax goes to England. Petroleum has also been found in Cāchār District at Māsimpur and Badarpur on the bank of the Barāk, and near the Laranga a little to the north of Kālain. At Khāsimāra, on the southern slopes of the Khāsi Hills, springs yield oil which recent analysis has shown to be singularly free from wax and of high lubricating power.

Iron is still worked, but to a very small extent, in the Khāsi Hills. It is derived from the minute crystals of titaniferous iron ore, which are found in the decomposed granite on the surface of the central dike of that rock, near the highest portion of the plateau. The iron is of excellent quality, and the industry was formerly one of considerable importance, the metal being exported to the Surmā and Brahmaputra Valleys. Large quantities of iron ore used to be extracted from the coal measures in Upper Assam under native rule, and iron abounds in the Mīkīr Hills. In the time of the Ahom Rājās, gold was regularly

washed from many of the rivers in the Assam Valley, but the industry died out with the disappearance of the native system of compulsory labour. In 1894 a syndicate was formed and a considerable sum of money expended on the exploration of the rivers of Lakhimpur District, but gold was not found anywhere in paying quantities, and no return was obtained on the capital embarked in the venture. Salt springs are found in the Upper Assam coal area, and in Cāchār and Manipur.

Platinum has been found in the sands of the Dihing river, and lead and silver in the Khamti Hills. Corundum occurs in the Khāsi Hills, and kaolin in the Gāro and Jaintiā Hills, and also near the Brahmakund at the eastern end of the Assam Valley.

Arts and manufactures.

Apart from tea, of which an account has been already given in the section dealing with Agriculture, the Province contains few manufactures of importance. In the Assam Valley and the hills the economic organization of society is of a very simple character. There is no indigenous class of artisans, no specialization of function, and handicrafts which in other parts of India are confined to special castes are practised as household industries. The Surmā Valley has passed beyond the stage in which the wants of the household are all supplied by the different members of the family; but artisans are scarce, and manufactured products are, as a rule, imported from beyond the frontier. Such as they are, the industries of most importance are the burning of limestone, the weaving of cotton and silk cloth, the preparation of molasses and mustard oil, the making of boats, canoes, and tea boxes, the refining of crude petroleum, and the manufacture of metal and earthen vessels, of rough iron implements, and of native jewellery.

The weaving of cotton cloth is still largely practised by the natives of Assam proper. The work is carried on entirely by women, and in almost every house is to be found a loom, on which most of the clothes worn by the members of the family are prepared; but these articles are chiefly intended for home use, and only an insignificant quantity is produced for sale. Weaving forms one of the most essential parts of a girl's education, and skill in this art does much to enhance the value of a bride. Among the well-to-do, home-made cotton cloths are being displaced by imported goods, and the ladies of the family confine themselves to the production of fine cloths, embroidered and enriched with borders of silk or gold and silver thread. In the Surmā Valley weaving was never a home industry, and was confined to the professional weaving castes; but most of these have now abandoned their traditional occupation for agriculture, and the great mass of the population are clothed in imported fabrics. The hillman's clothing, on the other hand, is usually home made, and the cloths, though rough,

are generally dyed a rich blue or red, the necessary ingredients being readily obtained from the surrounding jungle[1].

A more characteristic industry of the Assam Valley is the rearing of silkworms and the manufacture of cloth from their thread. There are four varieties of domesticated worm. The smaller or multivoltine *pāt* worm (*Bombyx croesi*) and the larger or univoltine worm of the same name (*Bombyx textor*) are both fed on the mulberry, and produce a fine white thread. The *mūgā* worm (*Antheroea assamoea*) is usually reared on the *sum* tree (*Machilus odoratissima*), and yields a yellowish buff silk with a rich gloss; but if fed on the *chapa* (*Magnolia Griffithii*) and the *mezankuri* (*Tetranthera polyantha*), it spins a very white cocoon. The *eri* worm (*Attacus ricini*) is so called from its attachment to the castor-oil plant (*Ricinus communis*), though it also feeds on various other trees. The matrix of *eri* silk is extremely gummy, and the thread has to be spun from the cocoon. The white cloth made of *pāt* silk is an article of luxury, and is not easily procured; but *mūgā* silk is largely used by the women of all classes of society in Upper and Central Assam, and as a holiday dress by men. It is also exported to the Hill Districts, where it is much appreciated by the Khāsis, Gāros, and other tribes. *Eri* cloth is of a drab colour, and, though often coarse in texture, is very durable. It is light but warm, and the ordinary cold-season wrap of the Assamese villager is generally made of this silk. The manufacture of both *mūgā* and *eri* cloth is purely domestic. There are no large filatures, nor any system of breeding the worms on an extensive scale, and all attempts made so far to practise sericulture as a commercial business have ended in failure. The villager rears silkworms enough to yield him a few ounces of thread, which he either gets his women folk to weave or sells at the village fair. In Upper Assam there is not much trade in silk, but in the western Districts the animistic tribe often obtain the cash required for their land revenue by selling *eri* cloth to the Bhotiās and other tribes inhabiting the lower ranges of the Himālayas, or to Mārwāri merchants for export to Calcutta. Proposals have recently been made for the development of the silk industry among the Khāsis and in Manipur.

The jewellery made in the Province does not, as a rule, possess much merit; but really artistic necklaces of gold filigree work are produced at Barpetā, and the enamelled lockets and ear ornaments of Jorhāt are not unpleasing. The enamel, which is usually a rich green or blue, is laid on between thin gold wire on a basis of lac, and is set with cheap garnets and false rubies. The Khāsis wear bracelets, necklaces, and coronets of silver and gold. They are handsome articles, but somewhat heavy in design. The industry is not of any

[1] For further details see *Monograph on the Cotton Fabrics of Assam* (Calcutta, 1897).

great importance, and is followed by only a few persons, most of whom have some other means of livelihood.

Other manufactures include brass and bell-metal utensils, iron-work, and rough pottery. The articles produced possess no artistic merit, and the local supply has to be supplemented by importation from Bengal. Bell-metal utensils are cast in moulds. Brass vessels are hammered out of thin sheets of that metal. The industry in the Assam Valley is largely in the hands of the Moriās, a class of degraded Muhammadans, who are said to be the descendants of prisoners captured by the Ahoms when Turbak was defeated in A.D. 1532. Under native rule the smelting of iron ore was a considerable industry. The chronicles of the Muhammadan invasions frequently refer to the large numbers of cannon possessed by the enemy, and these guns, some of them of great weight and size, are found scattered over the Assam Valley at the present day. Buchanan Hamilton, writing at the beginning of the last century, makes mention of a valuable iron-mine south of Jorhāt, and the remains of iron workings are to be seen all over the Khāsi Hills. Iron working, however, like other industries, has died out since the pressure of necessity has been removed, though the Khāsis still smelt small quantities of ore, which they convert into bill-hooks and other implements of agriculture. Other blacksmiths are usually foreigners, who work with imported metal, which they forge into bill-hooks, sickles, and ploughshares, but the industry has few followers and is of little importance. Pottery, which is of the simplest kind, is either made by Kumhārs on the wheel, or by Hiras, who beat out the clay to a thin sheet, and lay one strip upon another till the vessel is complete.

The most important manufacture of Sylhet, after tea, is lime, which is burnt on the banks of the Surmā river. Other specialities of the District are mats made of bamboo and reeds, boxes and furniture made of reeds, leaf umbrellas, bracelets of shell and lac, *agar* or *attar*, a perfume distilled from the resinous sap of the *agar* tree, children's toys, fish oil, dried fish, and boats. Ironwork inlaid with brass, lac inlaid with feathers and talc, and ivory fans and chessmen used formerly to be manufactured; but these arts are now in a very languishing condition.

Of recent years there has been some extension of the mustard-oil and sugar industries in the Province. At Gauhāti two mills, worked by steam, are capable of turning out over 3 tons of oil a day; but oilmen are generally foreigners, who use the ordinary bullock-mill of Upper India. Sugar-cane is still, as a rule, crushed between two wooden rollers, in spite of the superior advantages of the Bihiyā mill, and the juice is converted into raw molasses. Boat-building is carried on in Sylhet, and more than a hundred years ago the Collector of

that District built a ship of 400 tons burthen, drawing 17 feet when fully loaded. In the Assam Valley canoes are manufactured out of trees, which are hollowed out till only an outer skin about one inch and a quarter in thickness remains. If a large boat is required, the shell is plastered over with mud and steamed over a fire, and the sides are then distended by the insertion of thwarts.

The arts of carving in ivory and wood are almost extinct. Wood-carvers are generally carpenters by profession, and even their best work is usually very rough; carved ivory can only be obtained, on order, at Jorhāt, Barpetā, and Sylhet.

Apart from tea and petroleum, to which reference has been already made, the only industries in which European capital is embarked are saw-mills and the brick and pottery works at Ledo in Lakhimpur District. There were altogether eleven saw-mills in 1903, giving employment to 1,205 persons. The bulk of the output consists of tea boxes, which are generally made from the wood of the *simul* tree (*Bombax malabaricum*). In spite of the large local demand for this commodity, the industry is in a somewhat stagnant condition, as foreign-made boxes are much in favour with the agents in Calcutta. In 1903 the number of persons employed in the pottery works was 149.

Commerce and trade.

The first mention of the trade of Sylhet is to be found in the memoirs of Mr. Lindsay, who was appointed Collector of that District in 1778. The principal exports at that time were lime, elephants, iron, silk, coarse muslins, ivory, honey, gums, drugs, and oranges. For the Assam Valley records are fuller, thanks to the Muhammadan invaders. In the seventeenth century the Ahom rulers seem to have adopted a policy of isolation, and forbade people either to enter or leave their territories; and trade was carried on by a caravan, which proceeded once a year to Gauhāti with gold, musk, *agar*, pepper, and silk, and exchanged these products for salt, saltpetre, sulphur, and other articles. At the end of the eighteenth century the trade of the valley was in the hands of two men, who farmed the customs and established a monopoly at Hadira, on the north bank of the Brahmaputra, nearly opposite Goālpāra. On the British side there was a colony of European merchants, who had forcibly seized the monopoly of the trade from Bengal; and unsatisfactory though these arrangements were, the volume of business declined, on the occupation of the Province, owing to the abolition of the monopoly and the bad faith of the individual Assamese merchants. The imports, which consisted almost entirely of salt, were valued at $2\frac{1}{4}$ lakhs of rupees; the exports at $4\frac{1}{2}$ lakhs, three-fourths of which represented the price of lac, and the greater part of the remainder that of silk, mustard seed, and cotton.

At the present day, the trade of Assam is carried on in two different directions: first and chiefly with the neighbouring Province of Bengal;

and secondly with the tribes on the northern and eastern frontier. The economic organization of the Province is still very undeveloped; and, apart from tea, the bulk of the exports consists of raw products. The imports include manufactured goods; but as Assam does not produce enough grain to feed its large foreign population, there is also a large admixture of food-stuffs. The principal imports are cotton piece-goods and twist, husked rice, salt, sugar, kerosene, mustard and other oils, gram and pulse, tobacco, and metals. The chief exports are tea, unhusked rice, oilseeds, coal and lime, timber, jute, raw cotton, lac, hides, oranges, and rubber. The backward condition of the Province is illustrated by the fact that it exports unhusked rice and oilseeds and imports husked rice and mustard oil. Nearly all the rice exported goes from the Surmā Valley, which in normal years produces more than is required for local consumption. The imported rice goes to Upper Assam, where the proportion of garden coolies is very large.

The most important permanent centres of trade are Goālpāra, Barpetā, Gauhāti, Tezpur, Nowgong, Golaghāt, Jorhāt, Dibrugarh, and Sadiyā, in the Assam Valley; and Habiganj, Ajmiriganj, Sunāmganj, Chhātak, Bālāganj, Sylhet, and Silchar in the valley of the Surmā.

None of these places is, however, of great importance, as the tea industry has a very decentralizing effect upon the internal commerce of Assam. All over the Province weekly markets are held on stated days, where buyers and sellers meet, and most of the business is done. The classes who conduct the trade differ in the two valleys. In both, tea, the great export of Assam, is consigned straight from the gardens where it is produced to Calcutta, either to be sold there or shipped to England for sale, though a small but increasing proportion of the crop is now exported from Chittagong, whither it is conveyed by the Assam-Bengal Railway. A considerable share of the export trade in mustard from the Assam Valley is in the hands of a class of traders who are natives of Kāmrūp District; but almost all the rest of the export traffic, and nearly the whole of the import traffic of the valley, is carried on by Mārwāri traders from Rājputāna, who are usually known as Kayahs. There are in addition a few Bengali Muhammadans in the larger towns, who sell furniture, haberdashery, and oilman's stores; but the Kayahs monopolize the banking and wholesale business of the valley, and their shops are to be found not only in the business centres, but on every tea garden and on the paths by which the hillmen bring down their cotton, rubber, lac, and other products. The Assamese have no commercial aptitude, and have thus allowed the whole of the profits of the trade of their country to pass into the hands of foreigners. In the Surmā Valley the conditions are somewhat different. The native population contains a large trading element, and merchants from Dacca are more numerous

than in Assam proper. A fair number of Mārwāris are found, but in no sense do they dominate the trade of the valley.

Except among the Khāsis and a few of the Nāgā tribes, the number of hillmen who are entirely dependent upon trade for their support is small. Most tribes, however, grow articles like cotton, chillies, and lac for export, and bring them to the markets at the foot of the hills, where they exchange them for rice, salt, dried fish, cloth, and petty oilman's stores. This trade is largely carried on by barter. The tricks of the petty shopkeeper are not unknown; the cotton is often watered to increase its weight, and stones are embedded in the rubber. The Khāsis and Angāmī Nāgās are keen and energetic traders, and sometimes go as far afield as Calcutta in search of goods. Manipur exports rice, timber, and bamboos, and till recently also tea-seed and cattle. Timber and other forest produce are floated down the rivers into Cāchār, but grain and other goods go by cart-road to Dimāpur, a station on the Assam-Bengal Railway.

Almost the whole of the trade of Assam with other parts of India is carried on with Bengal, principally with Calcutta, that with other Provinces being less than one per cent. of the whole. The principal exports and imports have already been mentioned above, and statistics showing their value will be found in Table VI, appended to this article. The great bulk of the goods is still carried by river, though in the Surmā Valley the traffic of the Assam-Bengal Railway is increasing year by year. River-borne trade from the Assam Valley goes chiefly by steamer; but in the Surmā Valley, and especially in Sylhet, country boats are largely employed. There is very little road traffic between Assam and Bengal, and the only commodities brought into the Province by road are cattle, ponies, sheep, and other live-stock.

Foreign trade is carried on with Bhutān, Towang, and the tribes inhabiting the Lower Himālayan hills and the eastern end of the Assam Range. The Bhotiās of Bhutān and Towang bring down their goods on sturdy little ponies to fairs held at Darrangā and SUBANKHĀTĀ in the north of Kāmrūp, and at UDALGURI and Ghāgrāpāra in Darrang. The trade is largely carried on by barter, and the statistics which are collected by the local police and revenue officials must be received with caution. The tribes to the east export little but rubber, which is carried down by coolies, the chief markets being Tezpur, North Lakhimpur, and Sadiyā. Elsewhere the principal imports are rubber, wax, and ponies; the exports, cotton cloth and yarn, and silk. The total foreign trade is, however, worth only about 4 lakhs of rupees per annum.

The principal railway of Assam is the Assam-Bengal Railway, which runs from the port of Chittagong to Silchar at the eastern end of the Surmā Valley. A second branch of the same line runs along the

south of the Assam Valley from Gauhāti to Tinsukiā, a station on the Dibru-Sadiyā Railway, and is connected with the Surmā Valley branch by a line that pierces the North Cāchār Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. Work was begun on this railway in 1891, and five years later a length of about 115 miles from Chāndurā to Badarpur was opened to traffic; but the hill section presented difficulties of an exceptional character, and was not finally completed till the end of 1903. This section runs for the most part through shale of the worst description, often intermixed with bands of kaolinite, which swells when exposed and causes heavy slips, or exerts immense pressure on the sides of tunnels. To counteract this pressure, very heavy masonry was required, cuttings had to be arched in, and special measures taken to allow the drainage to escape. Though the hill section is only 113 miles in length, it contains 24 tunnels, 7 covered ways, and 74 major bridges, the longest being 650 feet, and the highest 113 feet above the river-bed; while many of the banks and cuttings approach 100 feet in height and depth respectively. Apart from the special engineering difficulties, great inconvenience was experienced owing to the absence of local labour and food-supplies, and to the unhealthiness of the country traversed. At one time, in addition to the railway material, food for more than 25,000 men had to be carried into the hills on elephants, bullocks, ponies, and other pack animals. The result is that the cost of construction of the hill section has been extremely heavy. The principal engineering difficulties in the plains were the bridge, 500 yards in length, which crosses the Kapili and the marshes which fringe its banks; and the bridge over the Barāk at Badarpur, which, though shorter, was even more costly, as its foundations had to be carried 80 feet below the river-bed. The line, which is on the metre gauge, has a total length within the Province of 571 miles, and has been constructed by a company working under a Government guarantee. The greater part of the capital has, however, been found by Government.

Communications.

A small line of great commercial importance is that running from the steamer port at DIBRUGARH to MĀRGHERITĀ, with a branch to Tālāp. The total length is only 78 miles; but it taps a large number of flourishing tea gardens, and affords an outlet for the coal and oil of Mākum to the Brahmaputra. It was constructed on the metre-gauge system by a private company, assisted with a Government guarantee, and was opened in 1885. The same year saw the completion of a small state railway in Sibsāgar District, running from Kakilāmukh on the Brahmaputra to Mariāni and Titābar, which was originally built for the convenience of the numerous tea gardens in the neighbourhood, as the unmetalled road to the river became almost impassable to wheeled traffic in the rains.

The total length is 30 miles, and the gauge 2 feet. Similar considerations led to the construction of a light railway, on the 2 feet 6 inches gauge, from TEZPUR *ghāt* in Darrang District to BĀLIPĀRA, a distance of 20 miles. The line was built in 1895 by a private company, but receives a small subsidy from the District board. The only other open line in the Province is the branch of the Eastern Bengal State Railway, which connects Dhubri with the Bengal system, and was opened for traffic in 1902. Fifteen miles of this line, which is on the metre gauge, lie within the boundaries of Assam.

Sufficient time has not yet elapsed for the effects produced by the completion of the Assam-Bengal Railway to be fully seen. Silchar, which was formerly extremely inaccessible in the dry season, has been brought within thirty-three hours of Calcutta; and it is hoped that population may pass by the hill section from the densely peopled plains of Sylhet to the extensive tracts of good land now lying waste in the Assam Valley. A line from Golakganj near Dhubri to Gauhāti is under construction, and there will soon be through railway communication between the eastern end of the Brahmaputra Valley and the more densely populated parts of India from which the Province draws its labour. A light railway is also under construction from Divārā Bazar on the Surmā river to the Maolong coal-field in the Khāsi Hills.

In 1891 only 114 miles of railway were open in the Province; by 1903 the figure had risen to 715 miles, of which 617 miles represented state lines. The total capital which by 1903 had been expended on the minor railways, the whole of which lie within the boundaries of the Province—the Dibru-Sadiyā, Tezpur-Bālipāra, and Jorhāt Railways—was Rs. 94,69,000. In that year 567,000 passengers and 317,000 tons of goods and minerals were carried by these railways: the gross working expenses were Rs. 5,95,000, and the net revenue yielded 5 per cent. on the capital employed.

The excellence of its water communications makes Assam less dependent upon its roads than other parts of India, and it was not till 1865 that steps were taken to construct a road through the whole length of the Brahmaputra Valley. This road runs along the south bank of the river from Sadiyā at the eastern end to a point opposite Dhubri, where it is connected by a steam ferry with the road system of Goālpāra and Northern Bengal. At Gauhāti it is joined by an excellent metalled road running to Shillong. Shillong is connected via Cherrapunji, Therriāghāt, Companyganj, and Sylhet with Cāchār, though for a distance of about 8 miles down the face of the Khāsi Hills, which here rise very sharply from the plains, the track is not fit for wheeled traffic. From Cāchār a bridle-path leads to Manipur, and from there a cart-road to the Brahmaputra, passing through Kohīmā, Dimāpur (a station on the Assam-Bengal Railway), and Golāghāt. A second

main road runs along the north bank of the Brahmaputra, but through the greater part of its length does not carry much traffic. The principal arteries of trade are, however, the rivers, and since recently the Assam-Bengal Railway, and the most important roads are those leading to the steamer *ghāts* or railway stations. Numerous roads have also been made in the tea Districts, connecting the various plantations with one another and with the main lines of communication, whether water, road, or railway. Apart from the trunk roads, the most important routes are: the road from Turā in the Gāro Hills to the Brahmaputra, the road that runs north from opposite Gauhāti to Darrangā at the foot of the Bhutān Hills, the roads from Rangāmātighāt to the north of the Mangaldai subdivision, the road from Sibsāgar to Disāngmukh on the Brahmaputra, and the Dhodar Alī, which runs along the south-east of Sibsāgar District. In the Surmā Valley two important roads are those from Sylhet to Fenchuganj, and thence to Kulaurā railway station, and from Silchar up the Hailākāndi valley.

Generally speaking, there has not been much change during the past ten years, but the route to Manipur was first made passable for carts after the outbreak of 1891. The ordinary bullock-carts of Upper India are in common use in the Assam Valley, but here and there carts are still to be found whose wheels consist of solid disks of wood. In the Surmā Valley carts are very scarce, and heavy goods are chiefly carried by boat and to some extent by pack-bullock. A primitive form of wheelless sledge is sometimes used for the transport of agricultural produce. In 1890-1 there were 293 miles of Imperial, 2,119 of Provincial, and 3,095 of Local fund roads; and the cost of maintenance was Rs. 4,70,000. In 1903-4 the figure for Provincial roads was 1,625 miles and for Local fund roads 4,483 miles, and the cost of maintenance was Rs. 8,87,000. Inspection bungalows are provided at intervals of 10 or 12 miles along all the main roads; but they contain nothing but a few tables and chairs and bedsteads, and the occupant must provide servants, food, and cooking utensils. The cost of metalling in Assam is very heavy. This is partly due to the high rate of wages prevailing, partly to the difficulty experienced in obtaining material. In 1903-4 there were only 144 miles of metalled road, most of which lay in the hills. Avenues of trees are not planted along the roads.

The chief means of communication in Assam are still its waterways. The Brahmaputra, which is navigable by large steamers to within a few miles of Dibrugarh, carries most of the trade of the Assam Valley. During the rains tea and other produce are brought down the tributaries that flow into it on either side, though the river ports are always connected by roads with the interior. The Surmā Valley is a network of streams, and during the rainy season the western part of Sylhet District

lies almost entirely under water. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh. Since the construction of the Assam-Bengal Railway the timing has been accelerated, and the journey up is now performed in four and a half and that down in three and a quarter days; but in the cold season fogs are sometimes a serious obstacle to traffic. A considerable amount of cargo is carried in these vessels, but special cargo steamers with large flats also run, to carry goods the bulk of which renders them unsuitable for carriage by the smaller and more speedy passenger boats. In the Surmā Valley large steamers run to Silchar during the rainy season, but in the cold season cannot proceed beyond Fenchuganj. Small feeder steamers ply on the minor rivers in both valleys. Ordinary native boats, which, when the wind is not favourable, are generally towed upstream, are largely used in the Surmā Valley and to some extent in Lower Assam. The typical Assamese craft consists, however, of a canoe hollowed out of a large trunk of wood. Steam ferries are maintained on the Brahmaputra at Dhubri and Gauhāti. Elsewhere, the river is crossed in canoes, or rafts made by fastening two or three canoes side by side and laying planks across them, and in the rains the passage sometimes occupies more than twelve hours. Most of the minor streams on the important roads are bridged, but a large number of ferries have still to be maintained.

For postal purposes the Province has been formed into a circle under a Deputy-Postmaster-General. The following statistics show the advance in postal business since 1880-1:—

	1880-1.	1890-1.	1900-1.	1903-4.
Number of post offices	145	276	344	344
Number of letter-boxes	107	195	423	452
Number of miles of postal communication	2,221	3,843	4,230	4,576½
Total number of postal articles delivered—				
Letters	2,115,436	2,991,462	4,979,070	5,044,936
Postcards	249,895	1,284,826	3,006,531	3,437,122
Packets	52,638	338,876	965,711*	872,586
Newspapers	417,742	755,785	1,049,453†	943,254
Parcels	37,256	74,903	136,406	173,994
	Rs.	Rs.	Rs.	Rs.
Value of stamps sold to the public	82,869	2,04,478	2,44,198	2,58,583
Value of money orders issued	13,46,130	52,11,700	98,76,590	92,98,498
Total amount of savings bank deposits	...	13,99,347	30,74,356	36,28,721

* Including unregistered newspapers. † Registered as newspapers in the Post Office.

The figures given above relate to both the Imperial post and the local or District post. The latter system was maintained by Local boards to provide postal communication between the head-quarters of Districts and subdivisions and revenue and police stations in the interior, in cases where the maintenance of the necessary lines of communication would not be warranted by the commercial principles of the Post Office. The expenditure from Local funds averaged Rs. 48,000 per annum during the five years ending with 1902-3. The number of District post offices on March 31, 1904, was 58, and the total length of District post mail lines 1,387 miles. In 1906 the whole of this system was transferred to the Imperial post.

Administration[1].

The administration of the Province is entrusted to a Chief Commissioner, acting immediately under the orders of the Government of India. His general executive staff consists of (1) the Assam Commission, which has a sanctioned strength of 41, and is composed of members of the Covenanted Civil Service, with a certain proportion of officers deputed from the Indian Army; (2) the Provincial Service, which has a sanctioned strength of 36, and is a body of subordinate magistrates recruited in India, most of whom are natives of that country; (3) the Subordinate Civil Service, which has a sanctioned strength of 52, and consists of native officers, most of whom are employed in the land revenue department.

As in other parts of India, the unit of administration is the District, the area in charge of a District Magistrate, or Deputy-Commissioner as he is here called, who is responsible for the collection of the revenue, the administration of justice, the preservation of order, and the harmonious working of all the departments of Government within its boundaries. There are altogether twelve Districts in the Province, with an average area of 4,435 square miles and an average population of 486,823. The six Districts in the Assam Valley have been formed into a Division under the general control of a Commissioner, but elsewhere the Chief Commissioner performs the functions of Commissioner of Division. The District is again divided into subdivisions, of which there are twenty-seven, including two Districts which have none, the average area of each subdivision being 1,971 square miles, and the average population 216,366. The District Magistrate, who is allowed one or more Assistants, holds direct charge of the head-quarters subdivision, and each outlying subdivision is entrusted to a magistrate, who is usually a European, subordinate to the Deputy-Commissioner. This magistrate is, however, invested with a considerable measure of responsibility, as within his jurisdiction he exercises, subject to the control of the Deputy-Commissioner, most of the functions of that officer. The

[1] For the changes made in 1905 in this and the following section, see EASTERN BENGAL AND ASSAM.

smallest unit of administration in the Assam Valley was originally the *mauza*, an area for which an officer called the *mauzadār* contracted to pay the revenue. Between 1883 and 1896 the majority of these *mauzas* were formed into *tahsīls*, which were placed in charge of salaried officers of higher rank, and which have an average area of 211 square miles and an average population of 47,000. Economy was the principal motive of this change, but experience showed that the reduction in expenditure was not so great as had originally been anticipated. The *mauzadāri* system is popular with the villagers, and has the additional advantage of creating a body of men who, while accepted by the people as their leaders, are bound to Government by the facts of their position. It has accordingly been decided to abolish gradually the existing *tahsīls*, and again entrust the duty of collection to the *mauzadār*. In the temporarily settled tracts the *tahsīldār* or *mauzadār* represents the Government in its most direct and visible form to the mass of the people. Elsewhere in the plains the police are brought most closely into contact with the villagers in rural areas.

In the two valleys the houses of the cultivators are scattered over a wide area, and the village organization was never very strong. Some authority was, however, exercised by the rural council (*mel* or *panchāyat*), and, though not recognized by our courts, its decisions are often accepted as binding by the parties concerned. In the hills the authority of the village headmen is greater; they are held responsible for the preservation of law and order, and are empowered to dispose of petty criminal and civil cases. The persons entrusted with the duty of collecting the house-tax, which takes the place of land revenue in the hills, are called *laskars* in the Gāro Hills, *dollois* and *sardārs* in the Khāsi and Jaintiā Hills, and *lambardārs* among the Nāgās.

The Chief Commissioner is further assisted in the administration of the Province by selected officers, who are responsible to him for the various departments committed to their charge. The appointments of Inspector-General of Police, Prisons, and Registration, and Superintendent of Stamps are held by a member of the Assam Commission of the standing of a Deputy-Commissioner. Till recently he was also Commissioner of Excise; but the charge of this department has now been transferred to the Commissioner in the Assam Valley, and to the Chief Commissioner in the Surmā Valley and hill Districts. Another officer of the standing of a Deputy-Commissioner is in charge of the department of Land Records and Agriculture. Public Works are entrusted to a Superintending Engineer, who also acts as Secretary to the Chief Commissioner in that department, and has under him a staff of Executive and Assistant Engineers and native subordinates. The Educational department is managed by a Director of Public Instruction, who is assisted by 2 Inspectors, 19 Deputy, and 15 Sub-Inspectors of

Schools. The Medical department consists of a Sanitary Commissioner, who is also the Principal Medical Officer of the Assam garrison, 9 Civil Surgeons belonging to the Indian Medical Service, and a certain number of Military or Civil Assistant Surgeons. The Forest department is under the control of a Conservator, assisted by a suitable staff. The civil accounts of the Province are in charge of a Comptroller, who is directly subordinate to the Financial Department of the Government of India. The Post Office is administered by a Deputy-Postmaster-General, and the Telegraph department by a Superintendent. These two officers are not, however, under the orders of the Chief Commissioner.

The only Native State of any importance under the control of the Assam Administration is MANIPUR. After the outbreak of 1891, a young boy, who was a member of a collateral line, was placed upon the throne; and during his minority the administration has been conducted by a member of the Assam Commission, who acts as Political Agent and Superintendent of the State. Advantage has been taken of this opportunity to introduce various reforms, and the system of administration has been in some ways assimilated to that prevailing in British territory. The native courts have, however, been retained, and the arrangements for the assessment and collection of land revenue are necessarily of a simple character. The States in the Khāsi Hills are of no importance, and the system of administration does not differ materially from that in force in other Hill Districts.

Legislation and justice.

The ordinary method by which measures of legislation are brought into force in the Province is that common to other parts of India, by which Acts are passed after full debate in the Council of the Governor-General for making Laws and Regulations, which apply to Assam as well as to other parts of the Indian Empire. Provision has also been made for the enactment of Regulations suited to the peculiar necessities of the Province, and the Chief Commissioner is empowered to propose to the Governor-General-in-Council drafts of any such Regulations as seem to him to be required. These Regulations, after they have been approved by the executive Council of the Governor-General, and have received his personal assent, are published in the *Gazette of India*, and thereupon have the force of law. The Chief Commissioner has also power, with the previous assent of the Governor-General-in-Council, to extend to the Province any measures passed by other local Legislatures which appear to him to be suited to its requirements.

The most important Acts of the Governor-General-in-Council which have come into force in Assam since 1880 are the following:—the Vaccination Act, XIII of 1880; the Labour Immigration Act, I of 1882, which was superseded by Act VI of 1901; and the Civil Courts

Act, XII of 1887. The Regulations proposed by the Chief Commissioner which have received the assent of the Governor-General-in-Council are:—the Frontier Tracts Regulation, II of 1880; the Assam Land and Revenue Regulation, I of 1886; the Assam Military Police Regulation, IV of 1890; the Sylhet *Jhum* Regulation, III of 1891; and the Assam Forest Regulation, VII of 1891. The following important Acts of the Bengal Council have also been extended to Assam:—the Public Demands Recovery Act, VII of 1880; the Municipal Act, III of 1884; and the Private Fisheries Act, II of 1889.

Stipendiary magistrates are the foundation of the system of criminal administration in the plains, for, though a few honorary magistrates have been appointed, the total amount of work done by them is inconsiderable. Appeals from their decisions lie to the Sessions Judge, except in the case of Magistrates with second and third class powers, from whom there is an appeal to the Deputy-Commissioner. In both valleys there is a Sessions Judge, from whom appeals lie to the High Court at Calcutta. Petty civil cases in the Assam Valley are heard by Assistant or Extra Assistant Commissioners, who exercise the powers of Munsifs. Above them come the District Magistrates, who act as Subordinate Judges, while the Sessions Judge is also the Civil Judge of the valley. In Cāchār, the same system is in force, the powers of the District Judge of Cāchār being vested in the District Judge of Sylhet. In the latter District, civil work is in charge of the District and Sessions Judge, assisted by two Subordinate Judges and a staff of Munsifs. In the Hill Districts and certain frontier tracts the High Court has no jurisdiction except in criminal matters over European British subjects, and the Chief Commissioner is himself the highest appellate authority in criminal and civil cases. The Deputy-Commissioner exercises the combined powers of District and Sessions Judge and Magistrate of a District, and the Assistant Commissioners and Extra Assistant Commissioners the powers of Magistrates and Munsifs. Judicial powers are also exercised by the local chiefs in the Khāsi and Lushai Hills.

Table VII, appended to this article, shows the amount of work done by the civil and criminal courts of the Province during recent years. The increase in criminal work is principally due to an increase in the number of cases under special Acts, such as the Labour Acts, XIII of 1859 and I of 1882, the Cattle Trespass Act, the Excise Act, the Municipal Act, and the Police Act. Appeals were preferred in 1903 by rather more than 36 per cent. of the persons on whom appealable sentences were passed in the criminal courts; and 74 per cent. of the appeals to the Sessions Court and 59 per cent. of those to District Magistrates were unsuccessful.

There has been little increase in civil business, except under the head of title and other suits, and rent suits in Sylhet. The great majority of

suits are for small sums, and in 1903 the value of about 84 per cent. of the total number instituted did not exceed Rs. 100. It is seldom, moreover, that the claim is disputed, and 79 per cent. of the cases were either withdrawn or compromised, or decided *ex parte*. Appeals were preferred in 1903 against 33 per cent. of the appealable decrees passed by Subordinate Judges and 28 per cent. of those passed by Munsifs, but in only 15 per cent. of the cases heard was the order of the lower court reversed. The readiness of the people to assert their rights can be judged from the fact that 21 per cent. of the appeals to the High Court at Calcutta were for amounts valued at less than Rs. 50.

The Inspector-General of Police and Prisons is also Inspector-General of Registration, and he holds besides the offices of Registrar of Joint Stock Companies under the Companies Act, and of Registrar-General of Births, Deaths, and Marriages under Act VI of 1886. All Deputy-Commissioners are registrars in their respective Districts. In the Brahmaputra Valley the sub-registrars are magistrates subordinate to the Deputy-Commissioner, who do this work in addition to their own duties. In the Surmā Valley there are special sub-registrars at the head-quarters of all subdivisions and rural sub-registrars at various centres. The Registration Act is not in force in the hills. The number of documents registered in 1881–90 (average) was 19,700; in 1891–1900 (average), 36,500; and in 1903, 55,400. The number of offices open in the last year was 29. Between 1881 and 1890 the average number open was 21.

Finance.

Little is known about the system of taxation in force in Sylhet under native rule. It is said that in A.D. 1582 the revenue was assessed at nearly 1¾ lakhs of rupees[1]; but Mr. Lindsay, who was Collector there in 1778, reported that under Mughal rule the District yielded little revenue beyond a few elephants, spices, and wood, and most of the local receipts seem to have been devoted to the up-keep of a military establishment to protect the frontier[2]. In 1776 Mr. Holland settled the District for 2½ lakhs, which was paid in cowries at the rate of 5,120 to the rupee; but great difficulty was experienced in realizing this assessment. The rates of land revenue assessed in Cāchār before it lapsed to the Company varied from 10 annas to Rs. 1–4–0 per acre; and in addition to this the cultivators were expected to provide the labour required for the Rājā's works, while trade was hampered by customs, monopolies, and market dues. The Ahom government was based upon a system of organized forced labour. Each free male above sixteen years of age was styled a *paik*. The *paiks* were grouped in bodies of three or four, termed *gots*, one of whom

[1] *Principal Heads of the History and Statistics of the Dacca Division*, p. 292 (Calcutta, 1868).

[2] *Lives of the Lindsays*, p. 163 (1849).

was always supposed to be engaged on public duty, and was supported while so employed by the remaining members of his *got*. Over each hundred *gots* there was an officer called *saikya*, and over every ten *saikyas* a *hazāri*. The whole population was thus organized either for military or industrial enterprise, and this supply of disciplined labour enabled the Rājās to construct the great public works which remain to be the wonder of an age when coolies can only be procured with great expense and difficulty. Groups of *paiks* were also assigned to the various industries then practised in the Province. The wants of the royal household were supplied by guilds of farmers, silk-weavers, gold-washers, oil-pressers, fishermen, and other artisans. The ministers and the Brāhmans received allotments of land and of peasants to cultivate it, and all adult males were liable to compulsory military service. The people supplied the government and the chief families with everything they required free of cost; and there was thus little necessity for a money tax, though sums were collected in the shape of poll-tax and revenue for land occupied by the peasants in excess of the free grant given to them in return for their service to the state.

The system of Provincial contracts was first introduced in 1871, when Assam formed part of Bengal, and in 1878 the contract with Assam was revised, as it was found necessary to provide funds to meet growing expenditure. The Province received the whole of the revenue from excise, Provincial rates, stamps, registration, law and justice, police, education, and a few minor heads, together with 20 per cent. of the land revenue; while it undertook entire responsibility for the charges pertaining to these departments, and for charges connected with administration and Provincial public works.

In the next settlement—that of 1882—the receipts and charges under excise, stamps, and registration, which had formerly been entirely Provincial, were equally divided between Provincial and Imperial, and similar treatment was accorded to the Forest budget. Sixty-three per cent. of the land revenue receipts was allotted to Provincial, together with a corresponding liability for the charges. The Provincial receipts were estimated to amount to Rs. 44,77,000 per annum, and the normal expenditure to Rs. 43,68,000. A margin was thus left for the growing needs of the administration. During the currency of this contract there was a satisfactory expansion of the revenue, and the additional funds which were thus rendered available enabled the administration to increase the efficiency of nearly every department. Considerable expenditure was incurred on surveys, and on the improvement of the frontier police force. New dispensaries were opened, the construction of the Jorhāt and Cherra-Companyganj State Railways was taken in hand, and a subsidy of a lakh of rupees per annum guaranteed to a company which undertook to build a line between Mārgheritā and

Dibrugarh. Large sums were also spent on the improvement of existing roads, the construction of bridges, and the opening out of new lines of communication.

In 1887 the Provincial share of receipts from stamps and excise was altered from 50 per cent. to 75 per cent. and 25 per cent., respectively, an arrangement which was not to the advantage of the Province. On the other hand, Assam received the whole of the land revenue, subject to the deduction of a fixed sum for Imperial needs, and half the revenue obtained under the head of assessed taxes. Grants were, moreover, made by the Supreme Government of Rs. 1,82,500 on account of capital expenditure on the Jorhāt and Cherra-Companyganj State Railways, and of Rs. 6,15,600, which represented the cost of quelling the Lushai outbreak of 1890–1. The settlement provided for an estimated expenditure of 49 lakhs per annum, and the revenues made over were calculated to bring in exactly this amount. This contract was not favourable to the Assam Administration. There was a fair expansion of revenue under land and forests, but other heads showed a want of elasticity, and in some cases the average receipts fell considerably short of the estimates. The development of the Province was thus hampered by want of funds.

The settlement that came into force in 1892–3 was a consolidated one, and not a collection of separate contracts for each Provincial head. The single contribution to Imperial revenues was fixed at Rs. 11,27,000, and the whole of the land revenue receipts were at first allowed to remain Provincial, though the Supreme Government subsequently appropriated a share of the increase derived from the resettlement of the Assam Valley. During the period of this settlement Assam enjoyed considerable financial prosperity. The revenue was elastic, and no difficulty was experienced in providing for the growing wants of the Province. A special battalion of military police was organized for the Lushai Hills, and considerable sums were spent on the construction of permanent bridges and the improvement of communications.

The chief feature of the settlement which came into force in 1897 and was extended to March 31, 1904, was the assignment of two-thirds of the land revenue to Provincial needs. The gross ordinary expenditure of the Province was estimated at Rs. 65,29,000, and the receipts at Rs. 66,43,000, the surplus being a set-off against the necessary development of expenditure in a backward Province. The earthquake of June 12, 1897, completely disorganized this settlement. The cost of the damage done was estimated at between 40 and 50 lakhs, to meet which the Supreme Government made a grant of 26 lakhs. The whole resources of the Administration were devoted to the restoration of the Province to the position in which it stood prior to the earthquake, and all thought of progress had, for the time being, to be laid aside.

It was, however, found possible to give effect to schemes, which had been for a long time under consideration, for the improvement of the position of the members of the Assam Commission, and of the civil police force.

A new settlement was introduced on April 1, 1904, and was intended to remain in force[1] until it became unfair either to the Government of India or to the Province. Its principal features are that Assam retains one-half of the revenue from land, stamps, excise, assessed taxes, forests, and registration, and is responsible for half the expenditure under these heads. The Province is also debited with the whole of the expenditure on general administration, courts of law, jails, police, medical, education, political superannuation charges, stationery, and printing, and various minor heads, receiving in turn such revenue as is obtained from these departments. The receipts and expenditure under the heads of civil works and railways also remain Provincial, except in those cases in which railway expenditure is specially provided from Imperial funds. An allotment of 20 lakhs was added to the balance remaining over from the former contract, and, in addition to the shares of revenue assigned, a fixed grant of 12 lakhs is annually made to the Provincial income. Further grants have since been made for the reform of the Police and Education departments. The expenditure at the commencement of the contract was estimated to amount to Rs. 72,07,000.

Statistics showing the principal heads of revenue and expenditure will be found in Tables VIII and VIIIA, appended to this article.

Land revenue.

The ordinary land tenures in Assam vary considerably in different parts of the Province; and different systems are in force in Sylhet and Goālpāra, two Districts in which a large proportion of the area is permanently settled, Cāchār, Assam proper, and the Hill Districts. An account of the revenue system peculiar to Cāchār, Sylhet, and Goālpāra will be found in the articles on those Districts; and the following paragraphs deal only with Assam proper and the hills, and with conditions which are more or less common to the Province as a whole.

The distinguishing features of the agricultural system of Assam proper are the large areas of unsettled waste land, and the system under which in certain tracts land is cultivated for two or three years and then resigned. These two conditions necessitate a simple system of land revenue administration; and, as a matter of fact, the ryot, provided that he pays his land revenue, is subjected to no harassing restrictions. He holds an annual or decennial lease from Government, and is free to relinquish the whole or any part of his holding, provided that notice is given to the revenue officers at the proper time. Decennial leases

[1] These arrangements have been modified in consequence of the formation of a new Province. See EASTERN BENGAL AND ASSAM.

confer a right of resettlement and a heritable and transferable title. Annual leases merely authorize the occupation of the land covered by them for a single year, though in practice the holder can always obtain resettlement if the land is not required by Government. Any unoccupied waste land may also be taken up for cultivation without notice or application, and, when so taken up, is settled with the occupant, but a prior claim to resettlement may be secured by filing an application for it. Large areas of land are annually relinquished and taken up in this way in those parts of the valley where fluctuating cultivation is practised. A strong revenue staff is maintained in each District, whose principal functions are to survey and issue leases for the land newly taken up, to test the applications filed for relinquishment, to correct the revenue roll, to record the areas under different crops, and to assist in the collection of the land revenue. The country is divided into circles, as the charge of the local accountant or *mandal* is called, which comprise, as a rule, about 5,000 acres. Over every 20 or 25 *mandals* there is an officer known as a Supervisor *kānungo*, who is continually testing their operations in the field, and supervising their work when they come in to head-quarters, while above the Supervisor *kānungo* comes the Sub-Deputy-Collector, who, under the existing rules, is required to be a graduate of a University, and to have a good practical knowledge of surveying. Most of the *tahsīls*, or units for the collection of land revenue, are now in charge of officers of this class; and there are in addition one or two in each subdivision who are in general charge of settlement work, but have no concern with the land revenue collection.

The organization of the Assamese into small bodies, or *gots*, consisting of three or four individuals styled *paiks*, one of whom was always employed on the service of the State, has already been described on page 86. Each *paik* was allowed sufficient land for his homestead, and $2\frac{2}{3}$ acres of rice land free of revenue, but was required to pay 12 annas an acre for anything taken up in excess of this quantity, in addition to a poll-tax of one rupee. The revenue was farmed to *chaudhuris*, and the nominal rate assessed was only Rs. 2 a 'plough,' an area which, according to Buchanan Hamilton, produced about 56 cwt. of 'rough rice' and 11 cwt. of mustard-seed. Little control was, however, exercised over the revenue farmers, and their exactions raised the rate to about Rs. 7 per 'plough'; while north of the Brahmaputra the demands of the hill tribes, who, with the break up of the Ahom system of administration, established a sort of right to the levy of blackmail, deprived the villagers of the whole of the profits of cultivation.

As soon as the British took possession of the country the system of forced labour was abolished, but the poll-tax was raised to Rs. 3 per head, subsequently commuted to a land revenue assessment. The rates varied at different times and in different portions of the

valley, but in 1853 they ranged from Rs. 1–3–0 to 10 annas per acre of cultivated land[1]. In 1870 the rates per acre were fixed as follows: homestead, which includes the garden surrounding the house, Rs. 3; transplanted rice land, Rs. 1–14–0; and other land, Rs. 1–8–0. The next settlement was made in 1893 for a term of ten years. The three-fold classification of land was retained, but the villages were roughly divided into four classes, and the revenue assessed on each of the three kinds of land depended upon the class in which the village fell. The main consideration taken into account in fixing the class of the village was the demand for land, as shown by the density of population and the proportion of settled to total area. No distinction was drawn between the good and inferior land of the same class in a village, and the assessment never pretended to anything like scientific accuracy. The rates assessed per acre were: homestead, Rs. 4–2–0 in first-class villages to Rs. 3 in villages of the fourth class; transplanted rice land, Rs 3 to Rs. 1–14–0; and other land, Rs. 2–4–0 to Rs. 1–8–0. The proportion of villages placed in the lowest class was very small, and full revenue is paid on all settled land whether cultivated or not, except in the case of land held on half rates. A detailed resettlement of two Districts, on principles similar to those which are followed in other parts of India, was commenced in 1902. The village has been abandoned as the unit of assessment, and steps are being taken to distribute the revenue more closely in accordance with the value of the actual field. A considerable area of land is held either revenue-free or at half full rates. These estates represent grants made by the Ahom Rājās for religious and other purposes. In 1903–4 the total settled area of Assam proper was 2,562,000 acres, the area of land held at half rates being 189,000 acres, and of land held revenue-free 81,000 acres.

The tea industry has played a large part in the development of Assam, and from time to time different rules have been in force to govern the grant of land for the cultivation of this plant. The earliest rules, those of 1838, applied only to Assam proper. One-fourth of the grant was to be held revenue-free in perpetuity, and a revenue-free period of from five to twenty years was allowed on the remaining three-fourths, according as the land was under grass, reeds, or timber, after which light but progressive rates were imposed. The rules of 1854, which were extended to the Surmā Valley, introduced certain modifications, but the bulk of the land taken up when they were in force was subsequently acquired in fee-simple, when the fee-simple rules were introduced in 1862. Under these rules the land was sold free of all revenue demand, the price charged varying from Rs. 2–8–0 to Rs. 10 an acre. There are now 332,000 acres of land in the Assam Valley

[1] *Report on the Province of Assam*, by A. J. Moffatt Mills; Darrang, p. xiii; Lakhimpur, p. 1 (Calcutta, 1854).

held on this tenure. The existing rules came into force in 1876. An upset price of R. 1 an acre is charged, and for two years the land is allowed to remain revenue-free. The rates gradually rise to 8 annas an acre in the eleventh and R. 1 in the twenty-first year. The lease runs for thirty years, and when it expires the land is liable to reassessment.

In the Assam Valley the issue of leases on favourable terms has never been allowed when the land is required for the cultivation of the ordinary staples of the Province. In Cāchār this restriction was not in force, and waste land was let out at progressive rates with a revenue-free term, for ordinary as well as for special cultivation. The rules varied from time to time, but the leases were granted for twenty or thirty years, with a revenue-free period of from two to three years. The maximum revenue assessed during the concluding portion of the lease varied from 12 annas to Rs. 1–8–0 an acre. These rules are no longer in force, and waste land taken up for ordinary cultivation during the currency of the settlement in Cāchār is assessed at the rates levied on similar land in the neighbourhood.

The ordinary form of taxation in the Hill Districts is a tax of Rs. 2 or Rs. 3 on each house, and no attempt is usually made to measure up the area of land actually occupied.

In Upper Assam the villagers find a ready market for their produce in the numerous tea gardens situated in this portion of the valley, and here the assessment made in 1893 is paid without much difficulty. In Lower and Central Assam the tea industry is of small importance, and the people suffered severely from the earthquake of 1897 and the floods which followed it, and from the terrible mortality caused by *kalā-āzār*. The Government of India accordingly directed in 1901 that the land revenue demand in this portion of the valley should be reduced by Rs. 1,80,000. Widespread famine or scarcity is unknown, but floods sometimes cause considerable local damage, and rules for the remission of land revenue have been introduced to afford the relief which is rendered necessary by such visitations. The area of waste land in the Province is so large that no necessity has yet arisen for checking the freedom of the ryot to transfer his land. The receipts under the head of land revenue will be found in Table VIII, appended to this article.

The original system of land revenue collection in Assam was one under which an individual of some wealth and local standing, called a *mauzadār*, entered into a contract with Government to pay the land revenue of one or more *mauzas*, or fiscal divisions. The contract was formerly made for a term of years, and the *mauzadār* enjoyed such profits as accrued from the extension, and made good any loss due to the decrease, of cultivation; but for the last fifty years the settlement has been revised annually, and the revenue collector has been rewarded by a liberal commission, which is supposed to compensate him for bad

debts and other expenses. Of recent years *mauzas* have in many cases been grouped together to form *tahsīls*, in which about a lakh of rupees is realized direct from the ryots by a Government officer who receives a fixed salary, and pays into the treasury only the amount he actually collects. Difficulties have, however, been experienced in dealing direct with such large bodies of cultivators, and it has been decided gradually to abolish *tahsīls*, and to entrust the duty of collection once more to the *mauzadār*. The cost of collection is equivalent to about 5 per cent. of the demand in *tahsīls*, and 7 per cent. in *mauzas*. If a cultivator fails to pay on the appointed date, a notice of demand is served upon him. This, as a rule, has the desired effect, but in cases of recusancy the movable property of the defaulter, and even the land itself, can be attached and sold. The amount of revenue for which such extreme measures are taken is, however, less than one per cent. of the Government demand.

Miscellaneous revenue.

The cultivation of opium is said to have been introduced into Assam in the reign of Lakshmī Singh, about 1770[1]. If this was so, the practice of opium-eating must have spread with great rapidity, as from Buchanan Hamilton's memoir it appears that in 1808 the drug was freely used by the Assamese. Consumption was unduly stimulated by the ease with which opium could be obtained, the effect upon the people was far from satisfactory, and in 1860 the cultivation of the poppy was prohibited. Supplies of opium are now received from the Board of Revenue, Bengal, and issued to licensed vendors from the Government treasuries. Opium is still largely consumed in Assam proper, more particularly in the two Districts of Sibsāgar and Lakhimpur, which in 1903–4 took considerably more than half the total amount used in the Province; but the restrictive policy of the Government has had a most marked effect upon consumption. The original duty levied in 1860 was Rs. 14 per seer; but this was raised by successive enhancements till in 1890 it was fixed at Rs. 37 a seer, at which it now stands. In addition to raising the price of the drug, which is often sold retail for as much as 10 annas a *tola* (about 2*s*. an ounce), the Government has reduced the number of shops at which it can be obtained from 5,070 in 1873–4 to 752 in 1903–4. A further tax is placed upon the trade in the shape of licence fees. Prior to 1874, licences for retail vend were issued free of duty. In 1903–4 the amount paid to Government on account of licence fees alone was no less than Rs. 3,44,000. This heavy increase in the cost of the drug, combined with an increase in the land revenue and a growing taste for imported goods, which tends to relieve the ryot of his surplus cash, has produced a remarkable

[1] *Report on the Province of Assam*, by A. J. Moffat Mills; Sibsagar, p. 75 (Calcutta, 1854).

decrease in consumption. In 1864–5 the total amount used in the Assam Valley was 1,939 maunds; in 1903–4 it was only 1,266 maunds. The revenue obtained from this head of excise is large. Between 1881 and 1890 it averaged Rs. 16,56,000 annually, rising in the next decade to an average of Rs. 18,75,000. In 1903–4 it was Rs. 18,65,000. In addition to imposing a high rate of duty, the Government attempts to restrict consumption by prohibiting the sale of more than five *tolas* (2 ounces) at a time to one individual, and by forbidding the vendor to give the drug in exchange for rice or other goods.

The revenue from country spirits is raised on the out-still system. The sites of the shops are fixed by Government, and the right to manufacture and sell country spirits at these places is put up to auction. Local opinion is consulted before a new shop is opened, and existing stills are closed if it is shown that they offer undue temptations to the drink-consuming classes. It has, however, been proved that the mere abolition of shops does not put a stop to drinking, but merely substitutes home-made for excise liquor, and the Government in its efforts to restrict consumption has constantly to bear this fact in mind. With the object of improving the excise administration, efforts are being made to introduce the central distillery system, which enables some supervision to be exercised over the quality of liquor produced. The limit of retail sale is 3 quarts; and a minimum price has been fixed of 6 annas a quart, except in the Khāsi Hills, where it is 8 annas. Country spirits are chiefly consumed by imported coolies, and the receipts under this head are highest in those Districts where imported coolies are most numerous. The average annual revenue rose from 2 lakhs in the period 1881–90 to 4·8 lakhs in the following decade; in 1903–4 the receipts were 7·08 lakhs. The expansion of the revenue is due to the growth of the foreign population, and to greater vigilance and efficiency in the excise administration. The hillmen and unconverted tribes and many of the garden coolies consume large quantities of home-made rice-beer, but no attempt is made to levy duty on this liquor.

Gānja is imported from Rājshāhi District in Eastern Bengal, under bond by warehouse keepers, and is issued from their stores, on payment of duty, to the persons who have purchased the right of retail vend. The revenue has expanded *pari passu* with the growth of the foreign population; the receipts averaging 2·2 lakhs between 1881 and 1890, and 3·3 lakhs during the next ten years. In 1903–4 the income under this head was 4·28 lakhs. The drug is in little favour among the Assamese, and the great majority of the consumers are either foreigners or natives of the Surmā Valley.

In comparison with other sources of revenue, the receipts from imported liquors are inconsiderable, amounting to only Rs. 18,869

in 1903–4. The use of spirituous liquors is believed to be spreading among the more advanced sections of the native community; but the total quantity consumed by them is small, and country-made liquor still holds its own among the mass of the drinking population. The incidence of excise revenue per head of population was: in 1880–1, 6 annas 4 pies; in 1890–1, 7 annas 2 pies; and in 1903–4, 8 annas 5 pies.

The following abstract shows the average net receipts under the head of judicial and non-judicial stamps and income-tax, in thousands of rupees:—

	Average, 1881–90.	Average, 1891–1900.	1903–4.
Judicial stamps	5,17	6,07	7,09
Non-judicial stamps	1,97	2,33	2,74
Income-tax*	2,09	2,73	2,48

* From 1887 only.

There has been a considerable development in the stamp revenue; and this is generally considered to be an indication of the prosperity of the people, as they are only too prone to spend their surplus resources in litigation. An increase in the sale of non-judicial stamps is a sign of prosperity or the reverse, according as a recourse to borrowing is regarded as the result of the extension of trade or of straitened circumstances. The greater part of the income-tax is realized from the salaries paid to Government servants or to the managers and assistants on tea gardens. The incidence of the tax per head of population in 1903–4 was 8 pies, and the number of assessees per 1,000 0·6.

Local and municipal.

Prior to 1879, the only funds expended under local control in Assam were certain Provincial grants, and in the Districts of Sylhet and Goālpāra the rates levied under the Bengal Road Cess and Zamīndāri Dāk Acts. These allotments were managed by the District Magistrate, with the assistance, in the case of roads and education, of special road fund and education committees. In 1879 a Regulation was passed, providing for the levy of a local rate, and the appointment of a committee in each District to control the expenditure on roads, primary education, and the District post. Three years later the District committees were abolished by executive order, and their place was taken by boards established in each subdivision, which are the local authorities in existence at the present day. The Deputy-Commissioner is chairman of the board of the headquarters subdivision, and each of the other boards in the District is presided over by the subdivisional officer. The Local boards are entrusted with the maintenance of all roads within their jurisdiction, except a few main lines of communication, the provision and main-

tenance of staging bungalows and dispensaries, and the supervision of village sanitation and vaccination. They are also in charge of primary education, subject to the general control of the Educational department, and are empowered to make grants-in-aid to schools of higher grade, subject to certain rules. For these purposes, they have placed at their disposal the rate which is levied under the Assam Local Rates Regulation of 1879, at the rate of one anna per rupee on the annual value of lands, as well as the surplus income of pounds and ferries, and some minor receipts. This income is in most cases supplemented by an annual grant from Provincial funds, the amount of which is fixed for a term of years. The principal heads of income and expenditure are shown in Table IX, appended to this article. The annual budgets of the boards are submitted to the Chief Commissioner for sanction. The estimates for all works costing Rs. 500 or more must be approved by the Public Works department, and important works, requiring much professional skill, are made over for execution to that department. Less important works are entrusted to the board overseers, and in the tea Districts much assistance is usually rendered by planters in the repair of roads and bridges.

In 1903-4 there were 19 Local boards in the Province, consisting of 364 members, of whom 60 were *ex officio*, 171 nominated, and 133 elected. In Districts where the tea industry is of importance, a certain proportion of the members are planters, who are elected by the planting community. Under a system recently introduced, the majority of the native members will also be elected. In 1903-4 of the members of the various boards, 132 were Europeans; and the existence of this strong European element and the comparatively small area entrusted to their charge imparts to the Local boards of Assam a degree of vitality not always found in the self-governing institutions of other parts of India. Some of the largest works constructed by them during the past ten years were as follows: bridge over the Disai river on the Dhodar Alī in the Jorhāt subdivision, cost (in round figures) Rs. 67,000; Gauripur-Rahā road in Goālpāra District, cost Rs. 2,23,000; Sylhet-Muktapur-ghāt road in North Sylhet subdivision, cost Rs. 1,09,000; Sunāmganj-Paglā road in the Sunāmganj subdivision, cost Rs. 1,04,000. Large sums in the aggregate have also been spent on the improvement and repair of the existing lines of communication, the construction of bridges, wells, and roads of less importance than those mentioned, and the maintenance of charitable dispensaries. Serious failure of the harvest occurs so seldom in Assam that Local boards are hardly ever called upon to administer relief, but a small sum was distributed in Sylhet in 1902.

Only fourteen urban areas in Assam are administered under some form of municipal law, and the average population of each of these places at the Census of 1901 was only 6,784, ranging from 16,893 in

Sylhet to 2,359 in Golāghāt. (Bengal) Act III of 1884 is in force in Sylhet, Gauhāti, and Dibrugarh, the only towns in the Province which contain more than 10,000 inhabitants within municipal limits, and in the small town of Dhubri. The remainder are administered under (Bengal) Act V of 1876, an Act which is also in force in two 'stations' and three 'unions.' The total strength of the fourteen committees in 1903–4 was 141 members, of whom 47 were elected, while 70 were nominated and 24 held office *ex officio*. Fifty of the total number were officials and thirty Europeans. The Deputy-Commissioner or subdivisional officer is chairman of the municipality at head-quarters, except in the case of Sylhet town, but the vice-chairmen are elected by the commissioners and are usually non-officials. The little towns in Assam are often of great extent, and include semi-urban and almost rural areas. Conservancy, water-supply, and drainage are thus difficult and expensive, and the length of the roads necessitates a large expenditure, especially where metalling is involved. Generally speaking, however, a reasonable standard of efficiency is maintained. The incidence of municipal taxation in 1903–4 was Rs. 1–4 per head, but the towns receive substantial grants from Government, and the average income per head was more than double this amount.

The most important public works in municipal areas are the water-works at Gauhāti and Shillong. At Gauhāti water is pumped from the Brahmaputra to the top of a hill, and thence distributed all over the town. Since these works were completed in 1887, there has been a marked improvement in the health of the place. In Shillong the water of the hill streams is distributed in pipes over the station.

Statistics showing the principal items of municipal income and expenditure will be found in Table X, appended to this article.

Public works.

The Public Works department in Assam is directed by a Chief or Superintending Engineer, who is also Secretary to the Chief Commissioner, aided by an under-secretary. The executive staff comprises twelve Executive and Assistant Engineers and two temporary Engineers. Public works in the Lushai Hills are in charge of a District Engineer, who is an upper subordinate of the Public Works department, and works under the orders of the Superintendent of the Lushai Hills. The accounts of Imperial, Provincial, and Local works are examined and audited by an Examiner. All Provincial works, such as the construction and maintenance of the main lines of communication, and the erection and repair of all Government buildings of any size and importance, are directly under the department. As has already been explained, Local works involving much engineering skill are usually made over to the Executive Engineer for execution, and estimates exceeding Rs. 500 in value are submitted for professional approval.

The principal works completed by the department prior to 1890 were: the south trunk road from Dhubri to Sadiyā, 456 miles, completed in 1877; the north trunk road from Dhubri to North Lakhimpur, 326 miles; metalled road from Gauhāti to Shillong and from Shillong to Cherrapunji, 97 miles; road from Sylhet to Cāchār, 67 miles; road from Golāghāt to Nichuguard, at the foot of the Nāgā Hills, 63 miles; Jorhāt State Railway, 30 miles; and Companyganj-Therriāghāt State Railway, 8 miles. It was originally intended to carry this line up the face of the hill to Cherrapunji, but the cost was found to be prohibitive. It was wrecked by the earthquake of 1897, and has since been abandoned.

The principal works constructed since 1890 have been the Nichuguard-Manipur road, constructed from Imperial revenues at a cost of 28½ lakhs; and the Companyganj-Salutikar road, a section 9 miles long of the line of communication between Sylhet and Shillong. The latter runs across the line of drainage of the country, and, as the rainfall in this part of the District is extremely heavy, its construction was attended with serious difficulties. The cost of the road embankment was Rs. 1,41,000, and of the bridges Rs. 1,37,000; they were, however, seriously damaged by the earthquake and by flood, and have been reconstructed at a cost of Rs. 1,88,000. Considerable sums have also been spent on the Aijal-Silchar and Aijal-Lungleh roads, and the Maulavi Bazar-Manumukh road. Some of the largest bridges constructed by the Public Works department are those over the Krishnai and Singrā rivers on the south trunk road, and over the Digru between Shillong and Gauhāti. The cost of each was between three-quarters of a lakh and a lakh of rupees. Since 1897, the resources of the Province have been largely devoted to the restoration of buildings destroyed by the earthquake. The most expensive have been: The Secretariat Press, cost Rs. 1,27,000; Government House, Shillong, cost Rs. 1,91,000; Sylhet Collectorate, cost Rs. 1,68,000; and Sylhet Jail, cost Rs. 1,86,000. Other important works have been the Aijal water-works, cost Rs. 1,36,000; and the Manipur cantonments, estimate Rs. 6,56,000.

Army.

Assam is comprised in the Lucknow division of the Eastern Command. The military stations in 1904 were: Dibrugarh, Kohīmā, Manipur, Sadiyā, and Shillong. The total strength of the British and Native army stationed within the Province on June 1, 1903, was 2,227, of whom 58 were British.

There are volunteer corps, with head-quarters at Silchar, Dibrugarh, Lumding, and Shillong; their strength in 1903 was 731, of whom 637 were light horse or mounted rifles. In the Assam Valley separate volunteer corps were originally started in each District, the first to be enrolled being the Lakhimpur corps in 1882. In 1891 the mounted infantry in the four upper Districts of the valley were formed into

one corps under the designation of the Assam Valley Mounted Rifles, and five years later were converted into a body of Light Horse, which in 1903–4 had an efficient strength of 349. A volunteer corps was started in Sylhet in 1880 and in Cāchār in 1883, and the two were subsequently amalgamated into the Surmā Valley Light Horse, which in 1903–4 had an efficient strength of 270.

Police and jails.

The police force of the Province consists of civil police, rural police or village *chaukīdārs*, and military police. Under native rule there seems to have been no police administration, as we understand the term, and even in 1853 the total force employed in the Assam Valley was only 547 men. The numbers were, however, rapidly increased; and in 1874, when Assam was separated from Bengal, the civil police consisted of 3,452 men. The development of the military police rendered it possible to reduce the other arm of the force, which in 1903 consisted of 384 officers and 2,289 men, showing one policeman engaged on the prevention and detection of crime to every 20 square miles and every 2,185 persons. The corresponding figures for rural police in the three Districts in which alone they are employed were 2 and 458 respectively. The present sanctioned scale of superior officers is 6 District Superintendents and 11 Assistant Superintendents. Under the revised scale there will be 10 of the former and 5 of the latter.

For ordinary constables strong young men between 18 and 25, who are able to read and write, are selected as recruits. If required for the armed police, the selection is generally restricted to up-countrymen or members of the aboriginal tribes. Appointments to the grade of sub-inspector are occasionally made from the rank and file of the force, but the usual procedure is to select probationers from the list of approved candidates, who are drawn from a superior social position. Head constables and constables are trained by their immediate superiors; probationary sub-inspectors are placed under the orders of a selected inspector, and are not confirmed until a satisfactory report has been received of their conduct and capacity. The rural policeman is required to report all serious crime to the officer in charge of the police station within which his village is situated, to arrest persons committing such crimes in his presence, to collect vital statistics, to observe the movement of bad characters, and generally to inform his official superiors of anything likely to affect the peace and good administration of the District. Rural police are not employed in Assam proper, as there is little serious crime in that portion of the Province, and the *gaonbura*, or village elder, gives such assistance as is necessary. Educated natives used formerly to object to taking service in the department. The position and the moral tone of the police have, however, been improved of recent years, and the competition for minis-

terial appointments is now so keen that young men of good family are glad to accept nominations to the sub-inspector grade. The pay of the ordinary constable is not, however, sufficient to attract or retain a good class of recruit, and the readiness with which the men resign is a serious obstacle to the efficient management of the force.

A system of anthropometry was introduced into Assam in 1893, but was superseded in 1898 by the system of identification from finger-prints. The civil police are at present armed with smooth-bore Snider carbines, but bored-out Martini-Henry rifles will shortly be issued in their place. The strength of the civil and military police force is shown in detail in Table XI (p. 118). The average number of criminal charges dealt with by the police during the five years ending 1901 may be classified as follows: Investigated, 9,971; tried in court, 5,251; ending in acquittal or discharge, 993; ending in conviction, 4,052.

Prior to 1878, there were three separate bodies of *quasi*-military police in the Nāgā and Gāro Hills and in the Surmā Valley; but in 1878 the frontier police were formed into a separate force, and detachments stationed in each District. In 1882 the Assam Military Police Regulation came into force; and in 1903 the force consisted of five battalions, with a strength of 2,870 officers and men. The head-quarters of the battalions are at Aijal in the Lushai Hills, Silchar, Kohīmā in the Nāgā Hills, Turā in the Gāro Hills, and Dibrugarh; but during the cold season the military police hold thirty-six outposts, the majority of which are intended to keep in check the hill tribes on the frontier. The force has recently been rearmed with Martini-Henry rifles, and the officers commanding the four battalions at Silchar, Aijal, Kohīmā, and Dibrugarh are all military men. The military police form a valuable fighting force, and have taken part in the Manipur, Lushai, Abor, Apa Tanang, and Mishmi expeditions, where they served with credit. Railway police are employed only on the Assam-Bengal Railway and the Jorhāt State Railway. The total strength on these two lines consists of 3 officers and 51 head-constables and men.

The jails at Shillong and at the head-quarters of six plains Districts are District jails, as distinguished from the subsidiary jails at all the plains subdivisions except Hailākāndi and Barpetā, and at Dhubri, Nowgong, Kohīmā, Turā, and Aijal. Of the former class there were 7 in 1903, of the latter 17. The largest jails are those at Sylhet, which had a daily average population of 414; Tezpur, daily average 210; Gauhāti, daily average 249; and Dibrugarh, daily average 110. European prisoners can be confined in these jails, provided that the term of imprisonment does not exceed one month. Prisoners are not, as a rule, confined for more than six months in subsidiary jails, and convicts sentenced for longer terms are generally transferred to a District jail. The jail mortality has usually been high in the Assam

Valley, but in this respect it has not differed from that which prevails in the Province as a whole. The most prevalent diseases are dysentery, diarrhoea, and fever, and there are occasional outbreaks of cholera. The jail industries are not of great importance. They include the making of cane and basket-work furniture, the weaving of prison clothing and rough cloth, rice-husking, pressing of mustard oil, and gardening. At one time prisoners were largely employed on extra-mural labour; but this system has been, to a great extent, abandoned of recent years, as it tends to a relaxation of discipline. The larger jails are in charge of the civil medical officers of the Districts in which they are situated. The chief statistics with regard to the jails of the Province are shown in Table XII, appended to this article.

Education.

Under native rule very little attention was paid to education, and it is said that in 1838 there were barely thirty educated people in the District of Nowgong[1]. The Province was subsequently incorporated in the charge of an Inspector, Mr. Robinson, who in 1841 reported[2] that the state of education in the Brahmaputra Valley was 'deplorable in the extreme,' while fifteen years later he calculated that in the whole of his division, which included several Districts of Bengal, there were only 13,300 boys under tuition out of 1,262,000 children of school-going age. By 1856 English schools had been established at Sylhet and Gauhāti, 7 Anglo-vernacular schools in Sylhet, all of which were closed in the following year, 3 in Cāchār, and 1 in Goālpāra, and a Government vernacular school at the head-quarters of each of the five Districts of Assam proper. In the Brahmaputra Valley these were supplemented by schools in the villages, which had nearly 4,000 pupils, though the system of tuition was far from satisfactory; but even as late as 1868 less than 1,500 children were under instruction in the Surmā Valley[3], though the total population must have been about two millions. The earliest year for which it is possible to obtain statistics for the Province as a whole is 1875. By that time the system initiated by Sir George Campbell of encouraging indigenous institutions by the offer of grants-in-aid had begun to take effect, and the number of schools had risen to 1,193 and of scholars to 30,000. In 1903-4, 3,232 educational institutions existed, and 106,000 persons were under instruction. The department is now under the control of a Director of Public Instruction, an officer recruited from England, who is assisted by a staff of Inspectors, Deputy-Inspectors, and Sub-Inspectors of Schools.

After the closing of college classes at Gauhāti in 1876 the Province

[1] *Report on the Province of Assam*, by A. J. Moffatt Mills, p. 26 (Calcutta, 1854).
[2] *A Descriptive Account of Assam*, by W. Robinson, p. 277 (Calcutta, 1841).
[3] *Principal Heads of the History and Statistics of the Dacca Division*, pp. 326 and 365 (Calcutta, 1868).

was without any form of University education, and to meet this defect thirty-six scholarships for sums varying from Rs. 25 to Rs. 10 a month were allotted to boys who passed the Entrance examination with most credit. These scholarships were tenable for two years at any of the affiliated colleges in Bengal, and were extended for a further period if the holders passed the First Arts Examination satisfactorily. In 1892 the Murāri Chand second-grade unaided college was opened at Sylhet. It was founded and is maintained by a *zamīndār* of that District, Rājā Girish Chandra Roy, and teaches up to the First Arts standard, the full college course occupying two years. In 1901 a Government second-grade college, called the Cotton College, was opened at Gauhāti. The buildings have been designed on liberal lines, and include an excellent library and laboratory, and separate hostels for Hindus and Muhammadans. During the twelve years ending 1900 the degree of B.A. of the Calcutta University was obtained by 68 natives of the Surmā Valley, 29 of the Brahmaputra Valley, and 2 of the Hill Districts. In the same period 21 persons educated in Assam obtained the M.A. degree.

Secondary education is imparted in high and middle schools, which are again subdivided into middle English and middle vernacular. High schools are those institutions which are recognized by the Calcutta University as capable of affording suitable preparation for the Entrance examination. The boys are taught from the earliest stage of their education up to the Entrance course as prescribed by the University of Calcutta, but may leave school without completing the course. Till recently English was taught in all the classes. The younger boys no longer learn that language, but the standard of instruction is higher than that prevailing in lower secondary (middle) schools. English is the medium of instruction in the first four classes of high schools; in the lower classes and in other schools the vernacular is employed. In 1903–4, 10 high schools in the Province were under Government management, 9 were aided—that is to say, institutions under private management towards which Government makes a fixed contribution—and 7 were unaided. The course of instruction at middle English and middle vernacular schools is the same, with the exception that English is taught in the former and not in the latter. The following are the subjects taught in the middle vernacular course: Bengali or Assamese, comprising literature, grammar and composition, history of India, geography, arithmetic, Euclid (Book I), mensuration of plane surfaces and surveying, and elementary natural and sanitary science. In 1903–4 there were 75 middle English and 42 middle vernacular schools for boys. Of the middle schools, 78 were under private management, but received grants from Government or Local and municipal funds; 18 were entirely unaided. Grants are made only to those

schools which meet a recognized want, and are likely to be properly maintained; and they do not, as a rule, exceed the amount provided from fees and other sources. Three per cent. of the male population of school-going age were under secondary instruction in 1903-4.

Primary education is again divided into upper and lower; but the proportion of boys in upper primary schools is less than 5 per cent. of the total number, and this class of school is slowly dying out. The course of study in lower primary schools includes reading, writing, dictation, simple arithmetic, and the geography of Assam; but in 1903-4, 60 per cent. of the pupils were classed as illiterate, as they were unable to read and write. In upper primary schools the course is somewhat more advanced, including part of the first book of Euclid, mensuration, and a little history. Primary schools are usually managed by local boards or municipalities, and very few are managed by Government. The standard of instruction given still leaves much to be desired, but efforts have recently been made to improve it, by raising the rates of pay given to the masters. Fixed pay is now awarded at average rates of Rs. 8 a month for certificated and Rs. 5 for uncertificated teachers, supplemented by capitation grants at rates ranging from 3 annas to 6 annas for pupils in the three highest classes. Under the system formerly in force rewards were granted on the results of examinations, and there was thus some risk that the master might concentrate his attention on his brighter pupils and neglect the more backward scholars. These examinations have in consequence been abolished, except in so far as they are required for the grant of scholarships. Seventeen per cent. of the boys of school-going age were under primary instruction in 1903-4. The largest proportion of boys of school-going age attending school is found in the Khāsi and Jaintiā Hills, where in 1903-4 it was 33 per cent. Kāmrūp (29 per cent.) had the highest proportion in the plains, but in Darrang and Lakhimpur it was less than 17 per cent.

Altogether, 150 girls' schools were maintained in the Province in 1903-4, the proportion of girls actually under instruction to those of school-going age being 15 per 1,000, as compared with 12 and 5 in 1891 and 1881. The majority of the schools are of the lower primary class, and under the management of the Local boards; but in the Khāsi Hills there is a good secondary school maintained by the Welsh Mission, and the success that has attended their efforts can be judged from the fact that 34 per 1,000 of the female population of the District were returned in 1901 as literate, as compared with 4 per 1,000 in the Province as a whole. Elsewhere, the children are withdrawn from school before they have time to make much progress, and the condition of female education cannot be considered satisfactory. The subjects taught include sewing, in addition to those prescribed for

the ordinary lower primary course. In the Khāsi and Jaintiā Hills 15 per cent. of the girls of school-going age attended school in 1903-4; but in the plains no District had a larger proportion than Goālpāra, and there it was only 1 per cent.

The only forms of special schools in the Province are those for training teachers, a medical and an engineering school, and law classes. Only two training schools are now maintained, but arrangements have been made to train teachers at selected secondary schools. A medical school was established at Dibrugarh in 1900 with the help of a legacy left by the late Brigade-Surgeon Berry-White. It is maintained by Government, and teaches up to the civil Hospital Assistant standard, the course occupying four years. There were 101 students on its rolls in 1903-4. An engineering school at Dibrugarh was maintained from the proceeds of a fund left by the late Mr. Williamson, a tea-planter of the Sibsāgar District. This school taught up to the sub-overseer standard; but its working was not satisfactory, and it was recently closed, the funds thus set free being devoted to the establishment of scholarships tenable at an efficient engineering college elsewhere. Law classes are held at Gauhāti, Sibsāgar, Sylhet, and Silchar.

The only educational institution for European and Eurasian children in the Province is the middle school at Shillong. It was opened in 1881, closed after the earthquake of 1897, which destroyed the building, and reopened three years later. The number of pupils on the rolls in 1903-4 was twenty-nine.

Muhammadans are not as alive to the advantages of education as Hindus, and in 1901 the proportion of literate persons among them was less than half that prevailing among the Hindus. This is partly due to the fact that the immense majority of the upper and middle classes are Hindus, Islām having obtained most of its converts in Assam from the lower Hindu castes. The proportion of Muhammadans in high schools is barely a third of that of Hindus, and in middle and primary schools it is little over one-half. Special consideration is given to the claims of educated Muhammadans when making appointments to Government service, and efforts have been made to improve the character of instruction in their private schools.

The proportion of children under instruction to those of a school-going age has risen from 57 per 1,000 in 1880-1 to 90 in 1890-1, and to 121 in 1903-4. According to the Census of 1901, 36 persons per 1,000 were able to read and write. Education has made most progress in the Surmā Valley; and in the Cāchār plains 91 and in Sylhet 81 out of every 1,000 males were classed as literate. In the valley of the Brahmaputra the ratio varied from 68 in Kāmrūp to 49 in Goālpāra. The proportion in the Hill Districts was 50, but this high rate is partly due to the presence of a considerable foreign literate population in the hills.

Except among the Khāsis, the number of women who could read and write was inconsiderable. The best-educated sections of the community are the higher Hindu castes, such as the Brāhman, Kāyasth, Ganak, and Baidya. A considerable proportion of native Christians and Shāhās are also literate; but few of the aboriginal tribes, except the Khāsis, Gāros, and Lushais, have mastered even the elements, though schools have in many cases been opened for their special benefit. The fees charged cannot be considered prohibitive. In the upper classes of high schools boys pay from Rs. 2 to Rs. 3 a month, but education in lower primary schools is free, though presents are sometimes made to the teachers.

The following table classifies according to sources the direct expenditure incurred on various grades of schools in 1903-4:—

	Expenditure on institutions maintained or aided by public funds in 1903-4 from				
	Provincial revenues.	District and municipal funds.	Fees.	Other sources.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Arts colleges	8,496	..	6,604	3,464	18,564
Training and special schools	28,560	5,714	5,159	9,738	49,171
Secondary boys' schools	37,983	33,273	1,32,108	36,881	2,40,245
Primary boys' schools	16,525	2,14,015	20,222	60,883	3,11,645
Girls' schools	4,604	10,968	1,135	5,797	22,504
Total	96,168	2,63,970	1,65,228	1,16,763	6,42,129

In 1903-4 the number of newspapers published in Assam was 9, of which 3 were in English, 2 in Bengali, 1 in Assamese, and 3 in Khāsī. None of these papers was issued oftener than once a week, and not one had as many as 1,200 subscribers, the average circulation being about 750. Only nine books were published in 1903-4, most of which were small treatises of an educational character or works on religious subjects.

Medical.

There is no large medical institution in the Province, but 135 dispensaries are maintained, of which 35 have accommodation for in-patients. The largest hospitals are those at Dibrugarh (98 beds), Dhubri (37 beds), Tezpur (40 beds), and Nowgong (38 beds). One of these institutions has been opened at the head-quarters of each District and subdivision, and of recent years there has been a large increase in the number of rural or village dispensaries. The marked development in the number of dispensaries and in the extent to which they have been used by the people during the last twenty-three years is shown in the table on the next page.

Between 1881 and 1901 the population of the Province increased by 19 per cent.; but the number of cases treated in 1903 was nearly sixteen times the number in 1881, and more than eight operations were performed for every one carried out in the earlier year. The mass

of the people in the Assam Valley are, however, still indifferent to the advantages to be obtained from European methods. The majority of cases treated at the dispensaries are of a very simple character, and the operations performed are for the most part unimportant. A leper asylum has recently been opened at Sylhet. The total number of lepers treated in 1903 was 48.

	1881.	1891.	1901.	1903.
Number of civil hospitals and dispensaries	25	74	125	127
Average daily number of—				
(*a*) In-patients	161	212	361	374
(*b*) Out-patients	448	1,490	3,460	3,829
Income from—				
(*a*) Government . . Rs.	16,105	35,237	75,371	81,788
(*b*) Local and municipal funds . . . Rs.	8,593	52,278	94,964	94,259
(*c*) Fees, endowments, and other sources . Rs.	15,007	51,562	85,257	81,511
Expenditure on—				
(*a*) Establishment . . Rs.	18,026	45,054	84,475	96,069
(*b*) Medicines, diet, buildings, &c. . . . Rs.	19,516	92,020	1,67,539	1,11,675

There is a lunatic asylum at Tezpur, to which insane persons are sent from the Hill Districts and the Assam Valley. Lunatics from the Surmā Valley are sent to the Dacca asylum.

The chief statistics of the Tezpur Lunatic Asylum are shown in the following table:—

	1881.	1891.	1901.	1903.
Average daily number of—				
(*a*) Criminal lunatics	18	30	37	54
(*b*) Other lunatics	34	90	82	101
Income from—				
(*a*) Government . . Rs.	7,454	8,729	12,761	14,987
(*b*) Fees and other sources Rs.	600	150	1,672	686
Expenditure on—				
(*a*) Establishment . . Rs.	3,786	3,973	4,499	5,265
(*b*) Diet, buildings, &c. . Rs.	4,268	5,564	8,922	0,479

During the ten years ending 1901 there were 350 admissions. In 232 cases the cause of insanity was unknown; in 45 cases *gānja* was said to have been the predisposing cause, in 16 epilepsy, in 12 fever, in 10 spirit-drinking, in 2 heredity, and in 9 opium.

Inoculation is still practised in different parts of the Province. The virus is obtained from persons whose small-pox eruptions are about eight days old, and after it has been diluted with water it is applied to small incisions which have been made in the arm of the patient. An attack of small-pox supervenes, and if the patient recovers his

chances of contracting the disease in the ordinary way are very slight. Unfortunately, in many cases the person inoculated dies, and under any circumstances he is a dangerous source of infection to his neighbours. Inoculators seldom take service in the vaccination department, though preference is given to them before other candidates.

Vaccination is compulsory only in the larger towns, which in 1901 had a total population of 79,845; but, except among the Mahāpurushias, a somewhat bigoted sect of Vaishnavites, whose head-quarters are at Barpetā in Kāmrūp, its advantages are generally recognized. In 1903 the number of vaccinators employed was 263. Further information is given in the following table:—

	1880-1.	1890-1.	1900-1.	1903-4.
Population among whom vaccination was carried on	*	5,422,745	6,126,343	6,126,343
Number of successful operations	21,170	161,157	257,336	271,295
Ratio per 1,000 of population	*	27	42	44
Total expenditure on vaccination . . . Rs.	*	15,841-0-0	22,833-0-0	24,381-0-0
Cost per successful case . Rs.	*	0-1-9	0-1-8	0-1-9

* Information not available.

The system of selling pice packets of quinine at post offices was first brought into full working in 1896. In that year 67,000 packets were sold through the agency of the postal department, and 33,000 by missionaries in the Khāsi and Jaintiā Hills. In 1903-4 the number of packets sold was 105,000; but in 1898, which was a very unhealthy year, more than double this quantity was disposed of.

The sanitation of rural areas is in a condition far from satisfactory. There are no conservancy arrangements, and the water-supply is usually drawn from sluggish rivers and tanks exposed to every form of pollution, or from shallow wells. A considerable number of masonry wells have been constructed at central sites by the local authorities, but unfortunately the Assamese often decline to use them. In 1896 a system of sanitary inspection books was inaugurated in 110 villages, but it is doubtful whether any practical advantages have accrued. In the hills the villages are, as a rule, built on sites which are fairly free from jungle, and, though often very dirty, are exposed to the purifying influences of the sun and air.

Surveys.

The following account of the surveys of the Province is taken from the *General Administration Report* for 1902-3:—

'The professional revenue survey of the plains Districts of the Province was undertaken while these Districts formed part of Bengal, and was brought to a conclusion shortly after the formation of the Chief Commissionership. In this survey village boundaries, where they existed, and the boundaries of certain tea grants and revenue-free estates, as well as the geographical and topographical

features of the country, were mapped, usually on the scale of 4 inches to a mile; but, except in the Jaintiā Parganas and Cāchār, no field survey was made, and the results were of little practical use for revenue purposes. In the permanently settled portion of Sylhet, the survey was preceded in the years 1859–65 by a demarcation of the boundaries of villages and estates by non-professional agency, in the course of which maps of the estates were prepared by chain and compass on the scale of 16 inches to a mile; and these maps, inaccurate though they are in many respects, afford the most recent record of the boundaries of estates in that area. A cadastral survey, based on a regular professional traverse of the portions of the Assam Valley where most cultivation was to be found, was commenced in 1883 and completed in 1893, and similar cadastral surveys of the *ryotwāri* portions of Sylhet and Cāchār have been effected for resettlement purposes in subsequent years. The field maps of these surveys are on the scale of 16 inches to a mile. While the cadastral survey of a portion of the Assam Valley Districts was in progress, the opportunity was taken to train the local *mandals* in surveying with the plane table; and after the professional party had left the valley, certain additional areas were surveyed cadastrally by local agency on the basis of plane-table traverses in successive years. It was subsequently decided that all such extension surveys should be made on the basis of theodolite traverses; and since 1899 a permanent professional survey detachment has been maintained in the Province, which is charged with the duty of preparing traverses for further cadastral survey which the extension of cultivation may necessitate, as well as with correcting and bringing up to date the topographical details in the standard District maps, and with minor survey operations undertaken in the Province which require professional skill. Wherever an area has been brought under cadastral survey, arrangements have been made for having the maps and other records kept up to date as far as possible, and the permanent marks looked after by the agency of *mandals* in the Brahmaputra Valley and *patwāris* in the Surmā Valley. The Gāro, Khāsi and Jaintiā and Nāgā Hills, and a portion of the Lushai Hills have been surveyed by the Topographical Branch of the Imperial Survey Department.'

A full bibliography of writings dealing with Assam will be found in the *Report on the Progress of Historical Research in Assam* (Shillong, 1897). Other authorities which may be consulted are W. Robinson: *A Descriptive Account of Assam* (Calcutta, 1841); *Principal Heads of the History and Statistics of the Dacca Division* (Calcutta, 1868).—A. J. Moffatt Mills: *Report on the Province of Assam* (Calcutta, 1854).—Sir W. W. Hunter: *A Statistical Account of Assam* (1879).—J. M'Cosh: *Topography of Assam* (Calcutta, 1837).—Colonel Dalton: *The Ethnology of Bengal* (Calcutta, 1872).—A. Mackenzie: *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884).—R. B. Pemberton: *Report on the Eastern Frontier of British India* (Calcutta, 1835).—*Census Reports of Assam*, 1881, 1891, and 1901.—*Introduction to the Land Revenue Manual*,

Assam (Calcutta, 1896).—*An Account of the Province of Assam and its Administration* (Shillong, 1903).—Various papers in the *Journal of the Asiatic Society of Bengal*, more particularly vol. xli, Part i, 'Assam in the Sixteenth and Seventeenth Centuries,' by H. Blochmann; and vol. lxii, Part i, No. 4.—E. A. Gait: *The Koch Kings of Kāmarūpa* (Shillong, 1895); *A History of Assam* (Calcutta, 1906). A series of District Gazetteers by B. C. Allen have recently been published (1906–7).

TABLE I. Temperature in Assam

Station.	Height of Observatory above sea-level.	Average temperature (in degrees F.) for twenty-five years ending with 1901 in							
		January.		May.		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
	Feet.								
Silchar	104	65·0	25·3	80·6	16·1	83·7	12·9	74·3	21·3
Sibsāgar	333	59·9	20·1	78·7	14·4	84·0	12·0	69·0	18·3
Dhubri	115	63·4	20·4	77·5	9·0	80·4	4·0	71·8	16·5

Note.—The diurnal range is the average difference between the maximum and minimum temperatures of each day.
At Dhubri the figures for January are an average of twenty years and the others of twenty-one.

TABLE II. Rainfall in Assam

Station.	Average rainfall (in inches) for twenty-five years ending with 1901 in												Total of year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Silchar	0·71	1·87	8·35	14·51	16·57	21·47	18·79	19·92	14·14	5·84	1·58	0·57	124·32
Sibsāgar	1·24	1·83	4·88	9·15	12·02	13·58	16·41	15·91	12·36	5·22	0·99	0·61	94·20
Dhubri	0·43	0·60	1·95	4·65	15·02	24·30	16·47	12·78	13·85	3·29	c·29	0·14	93·77

Note.—At Dhubri the figures for October to December are for twenty-four years.

TABLE III. DISTRIBUTION OF POPULATION, ASSAM, 1901

Natural and administrative divisions.	Area in square miles.	Number of towns.	Number of villages.	Total population.			Urban population.			Persons per square mile in rural areas.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Surmā Valley.										
Sylhet	5,388*	5	8,330	2,241,848	1,141,060	1,100,788	30,832	19,046	11,786	119
Cāchār	3,769	1	1,332	455,593	244,161	211,432	9,256	6,575	2,681	410
Total Surmā Valley	9,157	6	9,662	2,697,441	1,385,221	1,312,220	40,088	25,621	14,467	291
Brahmaputra Valley.										
Goālpāra	3,961	2	1,461	462,052	242,685	219,367	10,024	6,868	3,156	114
Kāmrūp	3,858	2	1,716	589,187	292,869	296,318	20,408	11,993	8,415	147
Darrang	3,418	1	1,275	337,313	176,030	161,283	5,047	3,568	1,479	97
Nowgong	3,843	1	1,117	261,160	132,995	128,165	4,430	2,659	1,771	67
Sibsāgar	4,996	3	2,109	597,969	316,985	280,984	10,970	6,660	4,310	118
Lakhimpur	4,529*	1	1,123	371,396	199,359	172,037	11,227	7,091	4,136	84
Total Brahmaputra Valley	24,605	10	8,801	2,619,077	1,360,923	1,258,154	62,106	38,839	23,267	104
Hill Districts.										
Lushai Hills	7,227	...	239	82,434	39,004	43,430	...	...	...	11
Nāgā Hills	3,070	1	292	102,402	51,656	50,746	3,093	2,174	919	32
Khāsi and Jaintiā Hills	6,027	1	1,839	202,250	97,221	105,029	8,384	4,980	3,404	32
Gāro Hills	3,140	...	1,026	138,274	70,035	68,239	...	...	...	44
Total Hill Districts	19,464	2	3,396	525,360	257,916	267,444	11,477	7,154	4,323	26
Total British territory	53,226	18	21,859	5,841,878	3,004,060	2,837,818	113,671	71,614	42,057	108
Manipur State	8,456*	1	467	284,465	139,632	144,833	67,093	32,965	34,128	34†
Grand total	61,682	19	22,326	6,126,343	3,143,692	2,982,651	180,764	104,579	76,185	97‡

* Area modified since publication of *Census Report* of 1901. † For total area of State. ‡ The total area and population of Manipur have been taken as rural.

TABLE IV

STATISTICS OF AGRICULTURE IN THE ASSAM VALLEY DIVISION, EXCLUDING THE PERMANENTLY SETTLED ESTATES IN GOĀLPĀRA

(In square miles)

	Average for seven years ending 1899-90.	Average for ten years ending 1899-1900.	1900-1.	1903-4.
Current fallow	*	916	1,227	1,236
Unsettled waste	*	12,749	14,651	15,066
Rice	1,819	2,012	1,930	2,157
Other food-grains, including pulses	87	104	102	116
Oilseeds	241	257	193	253
Sugar-cane	29	27	28	30
Tea	178	249	320	320
Miscellaneous	308	373	343	312
Total area cropped	2,662	3,022	2,916	3,188
Area double cropped	274	281	210	283
Net area cropped	2,388	2,741	2,706	2,905

* Figures not available.

TABLE V

PRICES OF FOOD-GRAINS, &c., ASSAM

(In seers per rupee)

Selected staples.	Selected centres.	Average for ten years ending 1880.	1890.	1900.	Average for the year 1903.
Common rice	Cāchār	19	17	12	15
	Sylhet	21	20	13	14
	Kāmrūp	16	17	13	13
	Lakhimpur	11	13	11	10
Wheat	Cāchār	10*	10	8	8
	Sylhet	12	12	12†	...
	Kāmrūp	15	14	8	8
	Lakhimpur	9	9	7	8
Gram	Cāchār	13	14*	11	12
	Sylhet	15	16*	11	13
	Kāmrūp	10	13	11	12
	Lakhimpur	9	12*	10	11
Salt	Cāchār	8	10	9	12
	Sylhet	9	11	10	12
	Kāmrūp	8	10	10	11
	Lakhimpur	6	9	8	9

* Average for nine years.
† Figures for one year only; ten years' figures not available.


EASTERN BENGAL
AND ASSAM
WITH BHUTAN
Scale = 1: 4,000,000 or 63·1 Miles to an Inch
English Miles
0 20 40 60 80 100
DIVISIONS OF EASTERN BENGAL & ASSAM
1 DACCA DIVISION 2 CHITTAGONG DIVISION
3 RAJSHAHI DIVISION 4 ASSAM VALLEY DIVISION
5 SURMA VALLEY AND HILL DISTRICTS DIVISION
Native States coloured yellow
Railways opened and in construction
Canals
CONTINUATION ON SAME SCALE
Longitude East of Greenwich
J. G. Bartholomew.

TABLE VI

RAIL AND RIVER-BORNE TRADE OF ASSAM WITH OTHER PROVINCES

(In thousands of rupees)

Articles.	1890-1.	1900-1.	1903-4.
Imports, Foreign and Indian goods.			
Cotton twist and yarn	9,55	9,08	9,08
" piece-goods	86,77	86,66	89,56
Gram and pulse	9,72	13,84	14,25
Metals	27,14	39,68	28,83
Oils, kerosene	9,39	11,71	10,38
" others	12,17	21,41	14,09
Rice (husked)	6,15	38,41	19,87
Salt	20,55	20,65	14,45
Sugar	19,24	22,14	28,10
Tobacco	8,84	13,97	12,61
All other articles	61,58	1,25,50	1,31,68
Total	2,71,10	4,03,05	3,72,90
Exports.			
Rubber	3,63	3,82	1,18
Coal and coke	10,58	9,50	15,49
Cotton, raw	1,52	3,21	3,14
Hides and skins	2,17	5,65	9,32
Jute	8,52	15,10	17,99
Lac	1,13	1,99	4,92
Oilseeds	36,08	25,90	35,51
Oranges	2,30	1,21	13,58
Rice (unhusked)	32,74	31,36	42,18
Stone and lime	6,83	6,51	2,91
Tea	3,39,74	4,46,66	5,51,81
Wood	...	14,99	16,57
All other articles	38,24	68,75	51,00
Total	4,83,48	6,34,65	7,65,60

TABLE VI A

Foreign Land Trade of Assam

(In thousands of rupees)

Articles.	1890-1.	1900-1.	1903-4.
Imports.			
Blankets	8	5	7
Horses and ponies	23	15	85
Rubber	1,00	1,82	1,57
Spices	4	6	12
Wax	6	11	27
All other articles	23	26	1,30
Total	1,64	2,45	4,18
Exports.			
Cotton twist and yarn	2	4	9
" piece-goods	2	9	8
Opium	7	...	...
Rice (husked)	10	7	4
Salt	3	4	3
Silk	19	36	56
All other articles	17	17	34
Total	60	77	1,14

NOTE.—This table does not include trade with Manipur or Hill Tippera.

TABLE VII

Statistics of Criminal and Civil Justice in the Plains Districts of Assam

Criminal Justice

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.	Percentage of convictions in 1903.
Number of persons tried—					
(*a*) For offences against person and property	9,610	10,807	11,273	11,573	37
(*b*) For other offences against the Indian Penal Code . .	2,851	3,821	3,589	3,327	55
(*c*) For offences against Special and Local Laws . . .	4,616	7,762	6,654	7,343	63
Total	17,077	22,390	21,516	22,243	48

Civil Justice

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.
Suits for money or movable property	20,409	19,532	20,684	21,121
Title and other suits . .	2,514	3,577	3,220	4,076
Rent suits	1,972	3,811	4,966	4,836
Total	24,895	26,920	28,870	30,033

TABLE VIII. Sources of Provincial Revenue, Assam

(In thousands of rupees)

	Average for ten years ending March 31, 1890.		Average for ten years ending March 31, 1900.		Year ending March 31, 1901.		Year ending March 31, 1904.	
	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.
Land revenue .	41,13	24,06	56,13	43,37	62,15	46,75	63,68	67,51
Stamps . .	7,35	4,89	8,62	6,47	9,47	7,10	9,87	7,41
Excise . .	21,16	10,86	27,17	6,79	29,34	7,33	30,24	7,56
Assessed taxes .	2,18*	1,09	2,76	1,38	2,98	1,49	2,48	1,24
Forests . .	2,50†	1,25†	4,18	2,09	5,50	2,75	6,76	3,38
Registration .	34	20	48	24	56	28	70	35
Other sources .	10,44	5,33	13,42	5,64	28,01	5,34	37,79	5,57
Total	85,10	47,68	1,12,76	65,98	1,38,01	71,04	1,51,52	93,02

* The average is for three years. † The average is for eight years.

TABLE VIII A

Principal Heads of Provincial Expenditure, Assam

(in thousands of rupees)

	Average for ten years ending March 31, 1890.	Average for ten years ending March 31, 1900.	Year ending March 31, 1901.	Year ending March 31, 1904.
Opening balance .	8,37	11,13	5,40	16,09
Charges in respect of collection (principally land revenue and forests) .	8,82	11,71	12,09	13,05
Salaries and expenses of Civil Departments :—				
(*a*) General administration . . .	1,93	2,68	2,94	3,38
(*b*) Law and justice .	6,15	6,81	7,52	8,77
(*c*) Police . . .	9,01	13,91	16,35	15,05
(*d*) Education . .	1,60	1,92	2,08	2,65
(*e*) Medical. . .	1,17	2,13	2,68	3,20
(*f*) Other heads . .	98	2,63	3,01	2,82
Pensions and miscellaneous civil charges . . .	1,35	2,41	2,59	3,31
Public works . . .	6,40	17,47	18,81	24,85
Other charges and adjustments	7,01	4,81	3,84	4,53
Total expenditure	44,42	66,48	71,91	81,61
Closing balance .	9,28	10,44	4,53	27,50

TABLE IX

Income and Expenditure of Local Boards in Assam

	Average for ten years 1899-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Provincial rates	6,14,598	6,44,921	6,13,555
Public works	6,889	1,382	2,583
Pounds	61,459	69,201	75,987
Ferries	1,04,474	1,00,102	1,04,139
Contributions	2,22,323	2,43,299	3,39,118
Other sources	67,846	68,649	1,17,613
Total income	10,77,589	11,27,554	12,52,995
Expenditure on—			
Refunds	3,974	3,207	2,659
Post office	41,336	43,065	42,777
General administration	2,784	2,793	2,814
Education	1,86,186	2,15,522	3,28,459
Medical	71,000	97,219	99,578
Public works	6,82,681	7,82,248	6,11,433
Other heads	83,705	79,275	1,25,828
Total expenditure	10,71,666	12,23,329	12,13,548

TABLE X

Income and Expenditure of Municipalities in Assam

	Average for ten years 1899-1900.	1900-1.	1903-4.
Income from—	Rs.	Rs.	Rs.
Taxes on houses and lands	41,915	44,411	56,179
Other taxes	53,366	66,817	66,531
Rents	5,724	7,132	6,155
Grants from Government and Local Boards	40,031	67,953	69,147
Other sources	56,806	59,575	67,941
Total income	1,97,842	2,45,888	2,65,953
Expenditure on—			
Administration and collection of taxes	17,240	18,404	18,860
Public safety	6,954	10,400	11,453
Water-supply and drainage:—			
(*a*) Capital	31,548 (a and b)	25,555	19,275
(*b*) Maintenance		19,595	19,293
Conservancy	55,267	76,940	80,713
Hospitals and dispensaries	7,198	8,029	8,965
Public works	46,410	58,293	71,074
Education	6,060	7,806	8,942
Other heads	23,673	24,527	22,290
Total expenditure	1,94,350	2,49,549	2,60,865

TABLE XI

Statistics of the Civil and Military Police Force in Assam

	1881.	1891.	1901.	1903.
Civil Police :—				
Supervising staff:				
District and Assistant Superintendents	10	9	16	16
Inspectors	20	20	20	21
Subordinate staff:				
Sub-inspectors	57	59	116	137
Head constables	180	256	236	226
Constables	1,259	1,779	2,308	2,289
Union and municipal police	111	15	15	15
Rural police	5,304	6,792	6,854	6,807
Military Police :—				
Officers	255	273	354	343
Men	2,086	2,156	2,674	2,527
	Rs.	Rs.	Rs.	Rs.
Expenditure*	8,87,067	12,38,449	19,68,849	18,86,252

* Includes figures for rural police.

TABLE XII

Statistics of the Jails of Assam

	1881.	1891.	1901.	1903.
Number of District jails	4	9	9	7
Number of subsidiary jails (lock-ups)	17	13	15	17
Average daily jail population :—				
(*a*) Male	1,408	1,577	1,600	1,434
(*b*) Female	53	35	33	25
Total prisoners	1,461	1,612	1,633	1,459
Rate of jail mortality per 1,000	43	52	25	28
	Rs.	Rs.	Rs.	Rs.
Expenditure on jail maintenance	1,20,594	1,24,513	2,32,829	1,80,701
Cost per prisoner	82-8-8	99-12-9	142-9-2	123-13-9
Profits on jail manufactures	45,882*	28,548	13,357	9,410
Earnings per prisoner	34-0-0	25-15-0	9-3-0	7-6-0

* Chiefly from extra-mural labour.

TABLE XIII

STATISTICS OF COLLEGES, SCHOOLS, AND SCHOLARS IN ASSAM

Institutions.	1890-1.			1900-1.			1903-4.		
	Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.	Scholars.	
		Males.	Females.		Males.	Females.		Males.	Females.
Public.									
Arts colleges	...	...	...	1	49	...	2	120	...
Secondary schools—									
Upper	18	3,325	...	23	4,907	...	26	6,116	...
Lower	93	6,991	93	127	8,888	185	122	8,560	382
Primary schools—									
Upper	102	} 57,607	} 4,538	111	4,290	371	94	3,472	257
Lower	2,120			2,895	76,263	8,126	2,732	74,298	5,483
Training schools	16	290	41	22	350	30	7	373	58
Other special schools	7	202	8	17	849	...	22	1,155	...
Private.									
Advanced	96	1,852	...	89	2,427	4	76	2,384	...
Elementary	189	3,919	18	173	3,008	53	151	3,443	179
Total	2,641	74,186	4,698	3,458	101,031	8,769	3,232	99,921	6,359

Assam Range.—A range of hills lying between 24° 58′ and 26° 48′ N. and 89° 49′ and 94° 50′ E., which runs almost due east and west between the valleys of the Brahmaputra and Surmā. It consists of the GĀRO, KHĀSI and JAINTIĀ, NORTH CĀCHĀR, and NĀGĀ HILLS, and at its eastern end trends towards the north and is joined by the PĀTKAI to the Himālayan system, and by the mountains of Manipur to the Arakan Yoma. The general elevation is from 3,000 to 6,000 feet, but at Jāpvo in the Nāgā Hills a height of nearly 10,000 feet is attained. The Shillong peak (6,450 feet) is the highest point in the Khāsi Hills. Geologically, the range falls into two groups. The Gāro, Khāsi, and Jaintiā Hills and part of North Cāchār are known as the Shillong plateau, and consist for the most part of a great mass of gneiss. The eastern portion is mainly composed of sandstones of Tertiary age. Coal is found in the Gāro and Khāsi Hills, and in the hills south of LAKHIMPUR, and lime on the face of the Khāsi Hills overlooking the plains of Sylhet. Through the greater part of their length the hills take the form of sharply serrated ridges covered with dense forest, but the central portion of the Khāsi Hills is an elevated plateau consisting of rolling downs covered with short grass.

Assam Valley.—A Division in Eastern Bengal and Assam, consisting of the valley of the Brahmaputra between 25° 28′ and 27° 52′ N. and 89° 42′ and 96° 5′ E., shut in between the Himālayas on the north and the Assam Range on the south. The head-quarters of the Commissioner are at GAUHĀTI TOWN. The population of the Division at the last four enumerations was: (1872) 1,884,046, (1881) 2,252,003, (1891) 2,476,481, and (1901) 2,619,077. The slow rate of increase during the last decade is due to the exceptional unhealthiness that prevailed in the central portion of the valley. The total area is 24,605 square miles, and the density of population 106 persons per square mile, which is rather above that of Assam as a whole. In 1901 Hindus numbered 72 per cent. of the population, animistic tribes 18 per cent., and Musalmāns 10 per cent. Other religions included Jains (1,600), Buddhists (7,940), and Christians (12,526), of whom 11,151 were natives. The Division contains six Districts, as shown below:—

	Area in square miles.	Population, 1901.	Land revenue and cesses (1903-4), in thousands of rupees.
Goālpāra	3,961	462,052	1,80
Kāmrūp	3,858	589,187	13,51
Darrang	3,418	337,313	7,82
Nowgong	3,843	261,160	5,10
Sibsāgar	4,996	597,969	15,63
Lakhimpur	4,529	371,396	6,49
Total	24,605	2,619,077	50,35

The greater part of the Division consists of a level plain, lying on both sides of the Brahmaputra. In the centre is a tract of hilly country known as the MĪKĪR HILLS, which is cut off from the main mass of the Assam Range by the valleys of the Dhansiri and the Lāngpher. The Division contains 10 towns, rather more than half the total number in Assam, and 8,801 villages.

The largest towns are Gauhāti (11,661) and DIBRUGARH (11,227). The chief centres of trade are GOĀLPĀRA, BARPETĀ, Gauhāti, TEZPUR, and Dibrugarh. The Assamese have, however, no commercial aptitude; and the fact that tea is the principal industry of the Division prevents the formation of business centres, each large garden serving as a nucleus for local trade. KĀMĀKHYA and HĀJO in Kāmrūp, and the pool of BRAHMAKUND at the eastern end of the valley, are places of pilgrimage to which devout Hindus come from all parts of India. Gauhāti is locally identified with a town mentioned in the Mahābhārata, and Tezpur possesses interesting archaeological remains. SIBSĀGAR and NĀZIRĀ were the capitals of the Ahom kingdom.

Assaye.—Village in the Bhokardan *tāluk* of Aurangābād District, Hyderābād State, situated in 20° 15′ N. and 75° 54′ E. Population (1901), 302. It is famous for the battle fought in 1803, when Sir Arthur Wellesley with only 4,500 men defeated the Marāthās, who numbered 50,000. The battle-field is best visited from Sillod, which is 11 miles north-west of the village.

Assia.—Range of hills in the Jājpur subdivision of Cuttack District, Bengal, lying between 20° 35′ and 20° 41′ N. and 86° 14′ and 86° 17′ E., and containing interesting Buddhist, Muhammadan, and Hindu remains. The principal hills are ALAMGĪR, UDAYAGIRI, Baradihi, NALTIGIRI, and the outlying peak of Amrāvati or CHATIĀ.

Atagada.—*Zamīndāri* estate in Ganjām District, Madras. *See* KALLIKOTA AND ATAGADA.

Atak.—District, *tahsīl*, and town in the Punjab. *See* ATTOCK.

Atāri.—Village in the Kabīrwāla *tahsīl* of Multān District, Punjab, situated in 30° 26′ N. and 72° 1′ E., 20 miles south-west of Talamba. It is at present an insignificant hamlet, but contains a ruined fortress, once evidently of great strength, and is identified by Cunningham with the city of the Brāhmans, the third city taken by Alexander in his invasion of India. The citadel is 750 feet square and 35 feet high, surrounded by a ditch now almost undistinguishable, and having a central tower 50 feet in height. On two sides stretch the remains of an ancient town, forming a massive mound covered with huge bricks, whose size attests their great antiquity. No tradition exists as to the origin or history of these remains, and the name of the old city is unknown. The adjacent village of Atāri is quite modern.

Athgarh.—One of the Tributary States of Orissa, Bengal, lying

between 20° 26′ and 20° 41′ N., and 84° 32′ and 85° 52′ E., with an area of 168 square miles. It is bounded on the north by the State of Dhenkānāl; on the east and south by Cuttack District; and on the west by the States of Tigiriā and Dhenkānāl. The country is level, low-lying, and very subject to inundation. The soil is fertile, and the cultivation consists chiefly of rice, with an occasional crop of sugar-cane, pulses, and millets.

The founder of the State was Srī Karan Nīladri Bawārta Patnaik, who belonged to the Karan caste. It is said that he was the Bawārta or minister of the Purī Rājā, who conferred on him the title of Rājā and gave him Athgarh as a reward for his services, or, according to another account, as a dowry on marrying the Rājā's sister. The present chief, Srī Karan Biswanāth Bawārta Patnaik, is the thirteenth in descent. The State has an estimated revenue of Rs. 50,000, and pays a tribute of Rs. 2,800 to the British Government. The population increased from 36,603 in 1891 to 43,784 in 1901; of the latter number all but 2,643 are Hindus. The most numerous castes are the Chāsas (10,000), Sahars (6,000), and Khandaits and Pāns (5,000 each). The average density is 260 persons per square mile. The number of villages is 192, of which the principal is Athgarh, the residence of the Rājā. A small Christian colony is settled in three hamlets near Chagān village. The State is traversed by the old high road from Cuttack to Sambalpur and by the newly opened Cuttack-Angul-Sambalpur road. The Mahānadī river, which runs along the southern boundary, is navigable by boats. There is some trade in grain, and fuel and charcoal are largely exported to Cuttack. The State maintains a charitable dispensary, a middle English school, an upper primary school, 75 lower primary schools, and one Sanskrit *tol*.

Athmallik.—One of the Tributary States of Orissa, Bengal, lying between 20° 37′ and 21° 5′ N. and 84° 16′ and 84° 48′ E., with an area of 730 square miles. It is bounded on the north by the State of Rairākhol; on the east by Angul District; on the south by the Mahānadī river, which separates it from Baud; and on the west by Sonpur and Rairākhol. The country is for the most part covered with dense jungle, and a long range of forest-clad hills runs along its southern side parallel with the course of the Mahānadī. The origin of the State is obscure. According to tradition, the founder of the family, Pratāp Deo, came to Purī and quarrelled with the Rājā, who put to death two of his seven brothers. The survivors fled to Bonai, and established themselves there. Pratāp Deo next proceeded to Baud and thence to Athmallik, of which he took possession after killing the Dom chief. Official records, however, show that till lately the State had no separate existence, and in the treaty engagement of 1804 it is mentioned as a tributary of Baud. It was treated as a separate State in the *sanad* granted to the chief in 1894,

the terms of which were identical with those contained in the *sanads* of the other Orissa chiefs. The State has an estimated revenue of Rs. 71,000, and pays a tribute of Rs. 480 to the British Government. The population increased from 31,605 in 1891 to 40,753 in 1901, part of the gain being due to immigration from Baud and the Central Provinces. A great extension of cultivation has taken place in recent years, and the population is now nearly double what it was in 1881; but Athmallik is still, with the exception of Pāl Laharā, the most sparsely populated of all the Orissa States, the density being only 56 persons per square mile. Of the total population, all but 100 are Hindus. The most numerous castes are Chāsas (8,000), Gaurs (6,000), and Gonds, Pāns, and Sudhās (4,000 each). There are 460 villages, the principal being KAINTIRA, the residence of the chief. The trade in timber, rice, and oilseeds is carried on pack-bullocks and by boats. The forests contain good timber, but they have not been systematically worked. The State maintains a charitable dispensary, one middle English school, one upper school, and 32 lower primary schools.

Athni Tāluka.—North-eastern *tāluka* of Belgaum District, Bombay, lying between 16° 27′ and 16° 58′ N. and 74° 40′ and 75° 25′ E., with an area of 816 square miles. It contains one town, ATHNI (population, 11,107), the head-quarters, and 82 villages, including KUDCHI (5,879). The population in 1901 was 113,077, compared with 123,438 in 1891. The density, 139 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was 2·3 lakhs, and for cesses Rs. 19,000. Most of the lands of Athni are bare and treeless. The *tāluka* is divided by a range of hills into two very similar tracts of level country. The climate is generally dry and healthy, the average rainfall being only 23 inches. The southern portion, which is crossed by the winding Kistna, is an open plain of fine black soil with many small rich villages.

Athni Town.—Head-quarters of the *tāluka* of the same name in Belgaum District, Bombay, situated in 16° 44′ N. and 75° 4′ E. Population (1901), 11,107. The municipality, established in 1853, had an income averaging Rs. 16,600 during the decade ending 1901. In 1903-4 the income was Rs. 16,600. Athni is a place of importance as a local centre of trade. Its wheelwrights are known as excellent workmen; and it has manufactures of coarse cotton cloth, blankets, and saltpetre, as well as factories for pressing and cleaning cotton. It is the chief rural market in the District, sending cotton and grain westwards to Mirāj (24 miles), and receiving from the sea-coast through Mirāj rice, coco-nuts, and dried fish. The French traveller Mandelslo in 1639 noticed 'Atteny city' as one of the chief markets between Bijāpur and Goa. About 1670 the English geographer Ogilby mentioned 'Attany' as a great trading town. In 1679 this mart was taken from Sivajī by

the Mughal Dilāwar Khān, who sacked it. Dilāwar Khān wished to sell the people as slaves. Sambhājī, the son of Sivajī, who some time before had rebelled against his father and joined Dilāwar Khān, opposed the suggestion, and, on Dilāwar Khān ignoring his remonstrances, left the camp and became reconciled with his father. About 1720 Athni was seized by the Nizām, who made it over to the chief of Kolhāpur, by whom it was given to Rājā Sāhu of Sātāra in 1730. Athni lapsed to the British Government in 1839, on the death of the Nipāni chief. The town contains a Subordinate Judge's court, a dispensary, a municipal middle school, and four other schools, one of which is for girls.

Atmakūr Subdivision.—Subdivision of Nellore District, Madras, consisting of the ATMAKŪR and UDAYAGIRI *tāluks*.

Atmakūr Tāluk.—Inland *tāluk* of Nellore District, Madras, lying between 14° 26′ and 14° 49′ N. and 79° 15′ and 79° 49′ E., with an area of 640 square miles. The population in 1901 was 110,906, compared with 101,154 in 1891. The number of villages is 112, of which Atmakūr is the head-quarters. The demand on account of land revenue and cesses amounted in 1903–4 to Rs. 3,04,000. The *tāluk* is generally flat, though studded with isolated hills; the Velikonda range runs along its western border. There are no true forests, but the western hills are 'reserved' and low scrub jungle abounds. Two rivers, the Penner and Boggeru, aided by two smaller streams, the Keta Manneru and Biraperu, drain the *tāluk*. The climate is dry, with a rainfall of only 18 inches, but the soil is fairly productive. *Cholam*, rice, *rāgi*, *aruga*, *cambu*, and horse-gram are the chief crops, *cholam* occupying 57 per cent. of the cultivated 'dry' area. Indigo and cotton are also raised to some extent. The river Penner, forcing its way through the Velikondas from Cuddapah District, enters the *tāluk* at Somasila and runs through it for a distance of 35 miles, dividing it into two unequal portions. It contains 83 Government irrigation tanks, two of which (one at Anantasāgaram and the other at Kaluvāya) are good examples of ancient Hindu engineering.

Atmākūr State.—*Samasthān* or tributary estate in Hyderābād State. *See* AMARCHINTA.

Atpādi (*Athpādi*).—Village in the State of Aundh, Bombay, situated in 17° 25′ N. and 74° 59′ E. Population (1901), 5,027. It is famous for its cattle of the Khilar breed, reared by Dhangars. In consequence of its situation on a loop-road connecting the Karād-Pandharpur and Karād-Nāgār roads, the town is much visited by pilgrims to Pandharpur. About 12 miles distant is the well-known temple of Nāth at Kharsumdi, largely frequented by pilgrims, at which a cattle fair is held twice a year. Country blankets and coarse cloth are manufactured at Atpādi and exported to the Konkan. The village contains a post office, a dispensary, and a school teaching elementary English.

Atrāf-i-balda (='Suburbs of the city').—District of Hyderābād State, lying almost in the centre of the State. It is situated between the Districts of Medak and Elgandal on the north, Mahbūbnagar on the south, Nalgonda on the east, Gulbarga on the west, and Bīdar on the north-west. Owing to its villages being interspersed with those of the surrounding districts, its spherical values cannot be accurately given, but the limits are approximately between 16° 30′ and 18° 20′ N. and 77° 30′ and 79° 30′ E. It is a *Sarf-i-khās* or 'crown' district, and has a total area of 3,399 square miles, including the city of Hyderābād (26 square miles). The area of the 'crown' lands is 2,040 square miles, the rest being *jāgīr*. The country is mostly hilly; and thickly wooded hills, known as the Rājkonda range, stretch from Pīpalpād in the Ambarpet *tāluk* in a south-easterly direction, and enter Nalgonda District. The Anantagiri range, which begins in Mahbūbnagar District, enters the Patlūr *tāluk*, and, cutting across the Nizām's State Railway and passing north of it, runs almost parallel to the line from Vikārābād as far as Dhārūr. A large portion of this range is composed of high-level laterite. Isolated granite hills are seen everywhere; and the city of Hyderābād is surrounded by rocky eminences, from 200 to 300 feet in height, among which may be mentioned the Maulā Alī, the Golconda rock, and the black rock at Trimulgherry. The slope of country is from west to east and south-east.

Physical aspects.

The most important river is the Mūsi, which passes through three *tāluks* of the District. It rises in the Anantagiri hills near Sivareddipet, and flows almost due east, passing between Hyderābād city and its northern suburbs or Chādarghāt into Nalgonda District. The Mānjra just touches two of the villages of the Asafnagar *tāluk* in the north-west of the District. Other smaller streams are the Sākalvāni in the west, a tributary of the Mūsi; the Haldi or Paspaver in the north, a tributary of the Mānjra; and the Deo stream in the Jūkal sub-*tāluk*, which is also a tributary of the Mānjra.

The geological formation is the Archaean gneiss. Around Hyderābād, and stretching as far west as Lingampalli, 15 miles from the city, tors and boulders of fantastic shapes are seen everywhere, composed of basalt and granite piled up in picturesque confusion.

Low scrubby jungles give cover to leopards, bears, hyenas, and occasionally tigers, while in the more open plains antelope abound. The Nizām's preserves, extending about 24 miles east of the city, are stocked with them. Partridges, quails, and wild pigeons are very common, and in the tanks and rice-fields wild duck, teal, and snipe are plentiful in the cold season.

The numerous tanks and streams make the climate damp, and malarial fevers are common in the rainy season. From October to the end of March, the District is generally very healthy.

The annual rainfall during the twenty-one years ending 1901 averaged 33 inches. The amounts received in 1892, 1893, and 1894 were much above the normal, being 46, 55, and 50 inches, while in 1899 only 19 inches fell.

History. The District formed part of the territory of the Kākatīyas of Warangal (1150–1325), but has been under Muhammadan rule since the conquest of the Deccan in the fourteenth century. During the reign of Sultān Mahmūd Shāh Bahmani, the governor of the Telingāna districts declared his independence, and in 1512 assumed royal dignity under the title of Sultān Kuli Kutb Shāh. The Kutb Shāhis reigned until the conquest of the Deccan by Aurangzeb, who incorporated their kingdom in the empire of Delhi, from which it was again separated on the foundation of the Hyderābād State early in the eighteenth century.

Among the places of archaeological interest, the following deserve mention. The fort of Golconda, also known as Muhammadnagar, 5 miles west of Hyderābād, was once the capital of the Kutb Shāhi kings. Outside the fort, to the north, are the tombs of these kings, which rank among the most remarkable Musalmān sepulchres in the Deccan. Most of the tombstones are of black polished basalt with beautifully engraved inscriptions. At Maisaram, 10 miles south of Hyderābād, are the remains of some Hindu temples destroyed by Aurangzeb after the fall of Golconda. A mosque built from the materials of a large temple 200 years ago is still standing. The buildings in the city and its suburbs are comparatively modern, and are described in the article on HYDERĀBĀD CITY.

Population. The number of villages in the District, including *jāgīrs*, is 847. The population (excluding the city) at the last three enumerations was: (1881) 355,787, (1891) 389,784, and (1901) 420,702. The District is divided into five *tāluks* and one sub-*tāluk*, statistics of which, according to the Census of 1901, are given below:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Medchal	279	...	61	33,544	120	−11.8	Not available.
Ambarpet	560	...	124	81,535	145	+13.0	
Shāhābād	302	...	65	41,384	137	+ 4.9	
Asafnagar	290	...	64	47,217	162	+20.4	
Patlūr	522	...	115	45,006	86	− 2.0	
Jūkal (sub-*tāluk*)	87	...	22	15,789	181	+45.1	
Jāgīrs, &c.	1,333	...	396	156,227	117	+ 6.6	
District total	3,373	...	847	420,702	128	+ 7.9	14,745

More than 87 per cent. of the population are Hindus, and about 86 per cent. speak Telugu.

The most numerous caste is that of the agriculturist Kāpus, who number 75,774, or more than 18 per cent. of the total. Brāhmans number as many as 39,600; Komatis or trading castes, 13,400; Gollas or shepherds, 32,900; Gaundlas or toddy-drawers, 23,500; and Sālas or weavers, 17,500. Of the lower castes, the Dhers or village menials number 26,000, and the Chamārs or leather-workers 49,800. The population engaged in agriculture forms nearly 33 per cent. of the total.

Agriculture.

The District is situated in the granitic region, and most of its soil is *chalka* or sandy, derived from the disintegration of granite, with patches of *regar* or black soil interspersed here and there. In the Patlūr and Jūkal *tāluks regar* prevails to a greater extent, and in the former a large area of laterite or ferruginous clay exists, both these soils being very fertile. The *chalka* soil is chiefly suitable for *kharīf* or rainy season cultivation, such as yellow *jowār*, *bājra*, *rāgi*, and maize; while *rabi* crops, such as white *jowār*, cotton, and linseed, are raised on the *regar* and lateritic soils. The red soil or laterite is well suited for garden produce, wherever water is available. The soils in the river valleys and at the foot of the hills are particularly fertile.

The tenure of lands is mainly *ryotwāri*. Excluding *jāgīrs*, 393 square miles were cultivated in 1901, out of a total of 2,040. Forests and land not available for cultivation occupied 1,480 square miles, and cultivable waste and fallows 167 square miles. The staple food-crops are *jowār*, *bājra*, and rice, grown on 123, 48, and 34 square miles, or 32, 12, and 9 per cent. of the net area cropped. Oilseeds, such as sesamum, linseed, and castor, are cultivated in all parts, the aggregate area occupied by them being 81 square miles, while gram covered 24 square miles.

The District possesses no characteristic breed of cattle, and the ponies are of the commonest description. Sheep and goats of the ordinary kind are reared by shepherds. Near Golconda, a stud farm exists for the supply of horses to the State troops.

This being a Telingāna district, 'wet' cultivation is largely practised. Numerous dams have been constructed in the Mūsi, the channels being used as feeders to large tanks, such as the Husain Sāgar, and also directly for irrigating lands through which they pass. Water is also supplied from 139 large and 310 small tanks or *kuntas*, and from 2,253 wells. The total area irrigated in 1901 was 40 square miles.

In two forest tracts, one in the Patlūr and the other in the Shāhābād *tāluk*, certain kinds of timber are protected, including teak (*Tectona grandis*), ebony, and *nallāmaddi* (*Terminalia tomentosa*). The produce

of these forests is, however, of small size. Unprotected forest tracts exist in all parts, consisting of *ghairi* or common-wood used as fuel, and also for thatching and wattling.

No minerals of any economic value are found, except *kankar* or nodular limestone, basalt, and granite. Crude carbonate of soda is collected at Chandūr and Kāparti in the Ambarpet *tāluk*, by lixiviating saline earth. In the Patlūr *tāluk* laminated limestone known as Shāhābād stone, red ochre, and ironstone occur, the last being smelted for local use.

Trade and communications.

At Chandūr *sārīs* and handkerchiefs are made, and at Asafnagar brass and copper vessels of a superior kind. The Chamārs cure leather in a primitive way for manufacture into water-buckets and sandals.

The chief exports are *jowār*, rice and other food-grains, cotton, *ghī*, oilseeds, chillies, sheep and cattle, bones, jaggery, tobacco, hides and skins, and *tarvar* bark for tanning. The principal imports are salt, salted fish, opium, spices, gold and silver, copper and brass utensils, refined sugar, iron, sulphur, kerosene oil, raw silk, and silk and cotton cloths of every description. The city of Hyderābād is the chief centre of trade; but weekly fairs are held at several places, such as at Chintalcherū, Krishnareddipet, Kanktūr, Dilāvarganj, Tūprān, and Dhārūr. The principal trading castes are the Komatis and a few Mārwāris.

The District is well favoured as regards railways. The Nizām's State Railway crosses it from east to west, with six stations, and the Hyderābād-Godāvari Valley line starting from Hyderābād has one station within its limits. The total length of railways is about 98 miles.

There are six roads: namely, from Hyderābād via Shamsābād to Mahbūbnagar, 45 miles; Hyderābād to Nalgonda, 80 miles; Hyderābād via Bībīnagar to Bhongīr, 28 miles; Hyderābād to Medchal, 34 miles; Hyderābād to Patancherū via Lingampalli, 16 miles; and Dhārūr to Kohīr in Bīdar District, 24 miles: making a total of 227 miles. The first, second, and fourth are portions of the military roads leading to Raichūr, Masulipatam, and Nāgpur respectively.

Famine.

The District generally escapes famine, but it suffered severely from drought owing to scanty and unseasonable rain in 1896, 1897, 1899, 1901, and 1902. In the first two years no fodder was obtainable, and large numbers of cattle died.

Administration.

There are three subdivisions: one consisting of the Medchal and Jūkal *tāluks*, under a Second Tālukdār; the second, comprising the Patlūr and Asafnagar *tāluks*, under the Third Tālukdār; and the remaining two *tāluks* of Ambarpet and Shāhābād are managed by the First Tālukdār, who also exercises a general supervision over all his subordinates. Each *tāluk* is under a *tahsīldār*, while the sub-*tāluk* of Jūkal has a *naib-tahsīldār*.

The District civil court is presided over by the Judicial Assistant to the First Tālukdār, the latter being also the *Nāzim-i-Dīwāni* or Civil Judge. Cases decided or inquired into by the Assistant are submitted to the First Tālukdār for confirmation or decision. The subordinate civil courts are those of the *tahsīldārs*. The First Tālukdār is the chief magistrate of the District, and his Judicial Assistant is also a joint magistrate, who exercises powers as such during the absence of the First Tālukdār from head-quarters. The Second and Third Tālukdārs exercise magisterial powers of the second, and the *tahsīldārs* powers of the third class. Serious crime is not heavy.

Very little is known of the revenue history before the introduction of District administration in 1866; but the management was based on the farming of groups of villages or *tāluks* to revenue contractors for fixed sums, the farmers receiving 1½ annas per rupee for collection. In 1866 the present *tāluks* were formed, except the sub-*tāluk* of Jūkal, which was a *jāgīr* resumed on the death of the *jāgīrdār* in 1895 without heirs. The District has not been surveyed. The average rate of assessment on 'wet' land is Rs. 12 per acre (maximum, Rs. 47; minimum, Rs. 8), and on 'dry' land Rs. 1-3-0 (maximum, Rs. 4; minimum, R. 0-6-0).

The land revenue and total revenue for a series of years are given below, in thousands of rupees:—

	1881.	1891.	1901.	1903.
Land revenue .	6,08	7,06	8,02	6,06
Total revenue .	9,36	11,30	11,34	10,12

The ordinary one anna cess is not in force here, but an old tax known as the *rāsta-patti* or 'road tax' is levied at the rate of 1 per cent. on the land revenue collected, yielding about Rs. 6,800 annually. No local boards have been established; but at the head-quarters of the *tāluks*, as well as at Maulā Alī, Surūrnagar, Golconda, and Maisaram, conservancy establishments are maintained, the cost of which is paid from the *Sarf-i-khās* treasury, the general supervision being under the First Tālukdār's Assistant in the irrigation branch.

The First Tālukdār is the head of the police, with a *Mohtamim* or Superintendent as his executive deputy. Under the latter are 6 inspectors, 115 subordinate officers, 696 constables, and 25 mounted police. These are distributed among 48 police stations. In addition, 1,179 rural police are under the police *pātels* of the villages.

The District has no jail, prisoners being sent to the Central jail at Hyderābād. At the outlying *tahsīl* offices, excluding Asafnagar and Ambarpet, there are small lock-ups.

The District takes a high place in the State as regards the literacy

of its population, of whom 3.5 per cent. (6.3 males and 0.6 females) were able to read and write in 1901. There are, however, only 9 schools, of which 8 are primary schools, and one is a middle school. The number of pupils under instruction in 1881, 1891, 1901, and 1903 was 321, 461, 511, and 667 respectively. The total expenditure on education in 1901 amounted to Rs. 4,100, towards which fees contributed Rs. 484.

Two dispensaries are maintained, with accommodation for 40 in-patients. The total number of in-patients treated in 1901 was 33, and of out-patients 9,317. The operations performed numbered 280, and the total expenditure was Rs. 6,124.

The number of persons successfully vaccinated in 1901 was only 543, or 1.08 per 1,000 of population.

Atraulī Tahsīl.—North-eastern *tahsīl* of Alīgarh District, United Provinces, comprising the *parganas* of Atraulī and Gangīrī, and lying between 27° 48′ and 28° 9′ N. and 78° 12′ and 78° 38′ E., with an area of 343 square miles. The population rose from 164,073 in 1891 to 198,034 in 1901. There are 289 villages and 4 towns, the largest of which is ATRAULĪ (population, 16,561), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 3,77,000, and for cesses Rs. 61,000. The Ganges forms part of the northern boundary, and the Kālī Nadī skirts the *tahsīl* on the west and south. The Nīm Nadī and its tributary the Chhoiyā flow through the middle. Between the Ganges and Nīm Nadī the soil is naturally sandy, except in the Ganges *khādar*, which is a rich alluvial deposit. The rest of the *tahsīl* is a good loam tract, except where patches of *ūsar* land are found. In 1903–4 the area under cultivation was 266 square miles, of which 123 were irrigated. Irrigation is provided by the Anūpshahr branch of the Upper Ganges Canal.

Atraulī Town.—Head-quarters of the *tahsīl* of the same name, in Alīgarh District, United Provinces, situated in 28° 2′ N. and 78° 18′ E., on a metalled road from Alīgarh town. Population (1901), 16,561. The town was founded about the twelfth century, but little is known of its early history. It was a centre of local disaffection during the Mutiny. The Muhammadan inhabitants, who are chiefly descended from converted Hindus, have always had a bad reputation for turbulence; and during the rebellion the town was in the hands of the insurgents from June till September, 1857, when order was restored. The chief public buildings are the *tahsīli*, which was once a fort, the town hall, a dispensary, and a school. Atraulī has been a municipality since 1865. During the ten years ending 1901 the income and expenditure averaged Rs. 11,000. In 1903–4 the income was Rs. 17,000, chiefly derived from octroi (Rs. 13,000); and the expenditure was Rs. 17,000. The trade is largely local, and includes grain, sugar,

cotton, cloth, and metals. There is one cotton gin, which employed 192 hands in 1903. Four schools contain 600 pupils.

Attapādi Valley ('Valley of leeches').—A tract in the Walavanād *tāluk* of Malabar District, Madras, lying between 10° 54′ and 11° 14′ N. and 76° 27′ and 76° 48′ E. It is about 250 square miles in extent, and lies behind the ridge of the Western Ghāts which stretches from the Kundahs south-west to the Pālghāt Gap. The valley contains the source of the Bhavāni river and is mainly covered with thick forests, though grain is cultivated in parts by the Irulas who inhabit it. It is very malarious for most of the year.

Attingal.—Village on the banks of the Vāmanapuram or Attingal river, in the Chirayinkīl *tāluk* of Travancore State, Madras, on the high road from Trivandrum to Quilon, situated in 8° 40′ N. and 76° 48′ E. Population (1901), 3,889. It is the chief place in the Attingal *proverti*, the hereditary estate of the Rānīs of Travancore. Captain Nieuhoff, who gives almost the earliest description of it, observed in 1664 that 'the ancient race of the kings of Travancore owed its origin to Attingen.' The senior princess of the Travancore royal family is known as the Attingal Mūtta Tampurān. The installation of the Rānīs takes place here, and the Mahārājā pays a state visit to the village every January.

Attock District (*Atak*).—District in the Rāwalpindi Division of the Punjab, lying between 32° 34′ and 34° 0′ N. and 71° 42′ and 73° 1′ E., with an area of 4,022 square miles. It is bounded on the west and north-west by the Indus, which separates it from the Districts of Kohāt and Peshāwar in the North-West Frontier Province; and on the north-east by the Hazāra District of the same Province; while it adjoins the Punjab Districts of Rāwalpindi on the east, Jhelum on the south-east, Shāhpur on the south, and Miānwāli on the south-west. In shape an irregular oval, its northern extremity falls into two zones, the northern comprising the fertile Chach plain, the southern a dry, sandy, and stony tract which rises to the Kālā-Chitta Pahār or 'black and white range,' which separates it from the central portion. The Chach plain and the western half of the dry, sandy zone form the *tahsīl* of Attock. The central portion consists of a wide plain, stretching across the District from east to west and also containing two distinct zones: the northern of poor and stony soil; the southern fertilized by the waters of the eastern and the western Sīl, two streams which run into the Sohān river. The fertility of this zone decreases from east to west, its south-west corner comprising the wild and barren ravines round Narrara and Makhad. The Fatahjang *tahsīl* comprises the eastern half of this central portion with the eastern half of the dry zone north of the Kālā-Chitta Pahār, the western half forming the Pindi Gheb *tahsīl*. South of the Sohān lies the high plateau of the Talagang *tahsīl*, which rising to the Salt

Physical aspects.

Range, here parallel to the Sohān, is scoured by the deep mountain torrents that descend from the range into that river.

The District lies entirely on Tertiary rocks, with the exception of a band of Nummulitic limestone forming the Khairi-Mūrat ridge. The oldest of these are the Murree beds, which run as a narrow band across the northern part of the District. They are composed of red and purple clays, with grey and purplish sandstones, and are probably of miocene age. These are succeeded to the south by a great spread of lower Siwālik sandstone, which covers the greater part of the District and contains a rich mammalian fauna of pliocene age. It is overlain by the upper Siwālik conglomerates and sandstones, which occur at Makhad on the Indus and other localities. Still farther south the lower Siwālik sandstone is continuous with the similar beds of the Salt Range[1].

The flora is scanty, except where there are springs or watercourses, as at Hassan Abdāl; but the proportion of West Asian types is considerable, and a few species, hardly found farther eastwards, except at high altitudes, occur here at low elevation. In the actual valley of the Indus the clove pink has been observed, and on low hills *Scilla* and *Iris* are not uncommon, with the curious *Boucerosia*, a fleshy Asclepiad, like the South African Stapelias, the leaves of which are cooked or pickled as a relish. Timber and fruit trees are practically unknown except in gardens, or in that portion of the Salt Range which has been allotted to the newly formed District.

A few *uriāl* are found in the Narrara hills, and throughout the south-west of the Pindi Gheb *tahsīl*. Sometimes stray ones from the Salt Range are seen in Talagang. 'Ravine deer' (Indian gazelle) are occasionally found in the Attock *tahsīl*. Mahseer, *bachwa*, and other fish are caught in the Haro, Sohān, and Indus.

The temperature differs little from that of the Punjab plains, though the Talagang plateau, lying 1,200 feet above sea-level, is cooler than the rest of the District. Among the rocks of Attock, the sandy slopes of Jandāl, and the low hills of Narrara and Makhad the heat in summer is intense, hot winds prevail, and the glare of the sun, reflected by white sand and hot rocks, is terrific. The people suffer from tape-worm and guinea-worm owing to the badness of the water, but are otherwise robust and healthy. The annual rainfall varies from 17 inches at Pindi Gheb to 24 at Fatahjang, but is very uncertain.

History.

The history of the District is practically the same as that of RĀWALPINDI DISTRICT. HASSAN ABDĀL, the chief relic of the Buddhist period, was one of the towns subordinate to the capital of Taxila, and under the Gakhars, Mughals,

[1] Wynne, 'Tertiary Zone and Underlying Rocks in N.-W. Punjab,' *Records, Geological Survey of India*, vol. x, pt. iii.

and Sikhs the District followed the fortunes of Rāwalpindi. The chief historical events recorded are the defeat of Anand Pāl near Ohind by Mahmūd of Ghazni, the foundation of ATTOCK by Akbar, and its vicissitudes in the Sikh Wars. The District was constituted in 1904, the *tahsīls* of Attock, Pindi Gheb, and Fatahjang being transferred from Rāwalpindi District, and that of Talagang from Jhelum.

The antiquities of the District are described in the articles on ATTOCK TOWN and HASSAN ABDĀL.

Population.

The population of the District at the last three enumerations was: (1881) 444,307, (1891) 448,420, and (1901) 464,430, dwelling in 4 towns and 614 villages. It increased by 3·6 per cent. during the last decade, every *tahsīl* showing an increase except Talagang, while the increase in Fatahjang was only nominal. The Census of 1901 was taken during a season of drought, which had driven many of the men to migrate to the canal-irrigated tracts in the Punjab plains or to seek work on the Māri-Attock railway, then under construction. The District is divided into the four *tahsīls* of ATTOCK, FATAHJANG, PINDI GHEB, and TALAGANG, the head-quarters of each being at the place from which it is named, but the head-quarters of the Attock *tahsīl* will shortly be transferred to Campbellpore. The towns are the municipalities of PINDI GHEB and HAZRO, the cantonment of CAMPBELLPORE, the head-quarters of the District, and the fort of ATTOCK. The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Attock . .	651	3	191	150,550	231·3	+ 6·7	5,969
Fatahjang .	856	...	203	114,849	134·2	− 1·6	3,666
Pindi Gheb .	1,498	1	134	106,437	71·2	+ 7·1	3·796
Talagang .	1,199	...	86	92,594	77·2	− 1·5	3,087
District total	4,022	4	614	464,430	115·5	+ 3·8	16,518

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Muhammadans number 419,730, or over 90 per cent. of the total; Hindus, 37,052; and Sikhs, 6,991. The density of the population is very low. Various dialects of Western Punjābi are spoken in the District, but the Pathāns of the Chach plain in the Attock *tahsīl* and those round Makhad in the south-west corner of Pindi Gheb still speak Pashtū.

The most numerous tribe is that of the agricultural Awāns, who are

stronger here than in any other District, numbering 151,000, or 32 per cent. of the total population. Next to them come the Pathāns (38,000); the Maliārs, a tribe resembling the Arains of the Punjab proper (37,000); and the Rājputs (26,000). Other important agricultural classes are the Gūjars (12,000), Jats (12,000), Mughals (7,000), and Khattars (6,000), the latter being practically confined to this District. Saiyids are strong, numbering 12,000. The most important commercial classes are the Khattrīs and Aroras, who number 24,000 and 12,000 respectively. Of the artisan classes, the Julāhās (weavers, 18,000), Mochīs (shoemakers and leather-workers, 13,000), Lohārs (blacksmiths, 11,000), Tarkhāns (carpenters, 8,000), Kumhārs (potters, 8,000), and Telis (oil-pressers, 7,000) are the most important. Less important are the Musallis (sweepers and scavengers, 9,000), Nais (barbers, 8,000), and Dhobis (washermen, 6,000). Kashmīris number 7,000. Of the total population, 65 per cent. are dependent on agriculture, there being no large towns or manufactures.

There are Roman Catholic missions at Campbellpore and Attock. The District contained only 3 native Christians in 1901.

Agriculture.

In the north of the District the low-lying Chach plain with its numerous wells is exceedingly fertile, the soil being chiefly an alluvial loam. There is also a good deal of fertile land in the villages of the Sohān and other streams. Elsewhere the District is very poor in natural resources. Wild tracts of arid mountain and rock predominate, and the soil is light and shallow, with stone near the surface, and much broken up by ravines. The District is so sparsely populated that, although it suffers periodically from drought, real famine is unknown.

The land is mostly held by communities of small peasant proprietors, but there are large *zamīndāri* estates in the Fatahjang, Pindi Gheb, and Attock *tahsīls*. The following table gives the main agricultural statistics in 1903-4, areas being in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Attock . . .	651	308	33	41
Fatahjang . .	866	391	11	65
Pindi Gheb . .	1,499	442	7	201
Talagang . .	1,198	474	5	119
Total	4,214	1,615	56	426

NOTE.—The total area does not agree with that given in the *Census Report*, but is taken from a later survey.

Wheat, the most important product and the staple crop of the spring harvest, occupied 568 square miles in 1903-4; gram and oilseeds covered 132 and 125 square miles respectively; and barley only 43 square miles. The chief crop of the autumn harvest is spiked

millet, covering 179 square miles, while great millet occupied 35, pulses 41, and maize 32 square miles. Very little cotton or sugar-cane is grown.

The cattle are small and not of particularly good quality. The District is, however, noted for horse-breeding, especially the *tahsīls* of Fatahjang and Pindi Gheb, where there are large estates whose holders have means to devote to breeding. The Jodhra Maliks of Pindi Gheb and Khunda and the Awān Maliks of Lāwa are leading breeders. The scarcity of water and consequent absence of fodder is a difficulty, and much of the stock is sold when very young. There is a good breed of donkeys, and numbers of mules are raised. Eleven horse stallions are maintained by the Army Remount department, and four pony stallions by the District board. Large flocks of sheep and goats are kept, but the breed is generally inferior, though the fat-tailed sheep is common in the hills. Good pack-camels are bred in many parts.

Of the total area cultivated in 1903-4, 56 square miles, or 3·5 per cent., were classed as irrigated. Of this area, 40 square miles were irrigated from wells, and 15 from canals. In addition, 17 square miles of the cultivated area are subject to inundation from the Indus and other streams. The District had 6,451 masonry wells in 1903-4, all worked with Persian wheels by bullocks, besides 808 lever wells, unbricked wells, and water-lifts.

About 217 square miles of 'reserved' and 109 of unclassed forests are under the Forest department, and 32 square miles of forest under the Deputy-Commissioner. The most important are the forests of the Kālā-Chitta and Khairi-Mūrat ranges, which support a scattered growth of olive, *khair* (*Acacia Catechu*), and lesser shrubs. Other trees found are the *shīsham* (*Dalbergia Sissoo*) and *dhrek*, but on the whole the District is poorly wooded. In 1904-5 the revenue from forests under the Forest department was Rs. 26,700, and from those under the Deputy-Commissioner Rs. 2,000.

Veined marble is worked into pestles and ornamental objects at Garkawa in the Attock *tahsīl*. Lignite is occasionally met with in the Khairi-Mūrat hills, and small quantities of anthracite in the Pindi Gheb *tahsīl*. Coal is found in the Kālā-Chitta range. There are five bore-holes near Fatahjang, from which petroleum is obtained for use in the Rāwalpindi gas-works. Gold is washed in small quantities from the sands of the Indus, Sohān, and other rivers. Limestone and gypsum occur largely.

Trade and communications.

There are no arts or manufactures of importance. Country cloth is woven throughout the District, and silk embroidery is produced in the Attock *tahsīl*. *Lungīs* are made at Kamra and Shamsābād. Lacquered legs for bedsteads are made in a number of villages in the Pindi Gheb *tahsīl*; and iron vessels, locks, stirrups, saddles, shoes, and articles of reed-matting

are turned out in various villages. Soap is made in several places and snuff at Hazro. Boat-building is carried on at Makhad on the Indus.

The District possesses very little trade; and the ordinary manufactures described above are exported only to a small extent. A good deal of tobacco and snuff, however, goes from Hazro, the chief centre of trade in the District. Food-grains and oilseeds are, in good seasons, the chief exports. Piece-goods, rice, salt, and hardware are the chief imports.

The main line of the North-Western Railway traverses the north of the District, crossing the Indus at Attock; and the Khushālgarh branch, which leaves the main line at Golra in Rāwalpindi District, runs through the middle of the District to Khushālgarh on the Indus. The Māri-Attock branch, leaving the main line at Campbellpore, traverses the west of the District, giving direct communication with Multān. The grand trunk road, which follows for the most part the main line of rail, the Hassan Abdāl-Abbottābād road, and the Rāwalpindi-Khushālgarh road are the only important metalled routes. The unmetalled tracks are fit only for pack animals, and travelling is difficult. The total length of metalled roads is 45 miles, and of unmetalled roads 763 miles. All the metalled and 145 miles of the unmetalled roads are under the Public Works department, and the rest under the District board. There is a good deal of traffic on the Indus below Makhad. The Indus is crossed by the Attock bridge, with a subway for wheeled traffic, by a bridge of boats (now being replaced by a permanent bridge) at Khushālgarh, and by six ferries.

Administration.

The District is divided into the four *tahsīls* of Attock, Pindi Gheb, Fatahjang, and Talagang, each of which is under a *tahsīldār* and a *naib-tahsīldār*. The Deputy-Commissioner holds executive charge of the District, aided by three Assistant or Extra Assistant Commissioners, one of whom is in charge of the Pindi Gheb subdivision, and another in charge of the District treasury.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice. Civil judicial work is under a District Judge, and both officers are subordinate to the Divisional and Sessions Judge of the Rāwalpindi Civil Division. There is one Munsif, and a Cantonment Magistrate at Campbellpore. Crimes of violence against the person are rife, and in the Attock *tahsīl* a few serious crimes against property are committed annually. In the other *tahsīls* organized crime is uncommon; but the bitter factions into which the whole District is divided lead to violent crime, while the same cause renders detection always difficult. No man will give evidence, if he can possibly avoid doing so, against another member of the clan, except in cases in which the clan is divided against itself.

The history of the land revenue of the District up to its constitution in 1904 will be found in the articles on RĀWALPINDI and JHELUM DISTRICTS. The Talagang and Attock *tahsīls* were last assessed in 1901–2 and 1901–4 respectively, the demand being 1·6 lakhs and 2 lakhs. The *tahsīls* of Fatahjang and Pindi Gheb were last assessed with the Rāwalpindi District in 1885, at 2·7 lakhs; but the assessment is now under revision, and the anticipated increase in the land revenue demand is Rs. 33,000. The demand for 1904–5, including cesses, was 6·4 lakhs. The collections of total revenue and of land revenue alone in 1904–5 were Rs. 8,16,000 and Rs. 5,89,000 respectively.

The District contains two municipalities, PINDI GHEB and HAZRO, and one 'notified area,' ATTOCK. Outside these, local affairs are managed by a District board, whose income, mainly derived from a local rate, amounted in 1904–5 to Rs. 65,000. The expenditure was Rs. 41,000, of which education and medical relief formed the largest items.

The regular police force consists of 442 of all ranks, including 5 cantonment and 23 municipal police. The Superintendent usually has 3 inspectors under him. Village watchmen number 583. There are 11 police stations, 3 outposts, and 3 road-posts. A District jail is being built at Campbellpore.

The District stands twentieth among the twenty-eight Districts of the Province in respect of the literacy of its population. In 1901 the proportion of literate persons was 3·6 per cent. (6·4 males and 0·4 females). The number of pupils under instruction was 4,752 in 1880–1, and 7,268 in 1904–5. In the latter year the District contained 4 secondary and 46 primary (public) schools, and 11 advanced and 250 elementary (private) schools, with 219 girls in the public and 453 in the private schools. The expenditure on education was Rs. 12,000, the greater part of which was met from District funds.

The District possesses 7 dispensaries, at which 89,105 out-patients and 1,231 in-patients were treated in 1904, and 4,275 operations were performed. The expenditure was Rs. 9,000.

The number of successful vaccinations in 1904–5 was 14,345, representing 31·1 per 1,000 of the population. The Vaccination Act is not in force in this District.

[M. S. D Butler, *Settlement Report of the Attock Tahsīl* (1905).]

Attock Tahsīl (*Atak*).—*Tahsīl* of Attock District, Punjab, lying between 33° 38′ and 34° 0′ N. and 72° 7′ and 72° 50′ E., with an area of 651 square miles. The Indus bounds it on the north-west, dividing it from the North-West Frontier Province, while the Haro flows through from east to west. The north-west corner is occupied by the fertile Chach plain. South of this lies a dry sandy plain, beyond which rises the Kālā-Chitta range. The eastern half consists of the tract known

as the Nālā, which includes, along with a number of low hills and much broken country, a considerable area of fairly good level land, portions of which are irrigated from wells and by cuts from the Haro and other smaller streams. The population in 1901 was 150,550, compared with 141,063 in 1891. It contains the towns of ATTOCK (population, 2,822), its present head-quarters, HAZRO (9,799), the cantonment of CAMPBELLPORE (5,036), the head-quarters of the District; and 191 villages. The land revenue and cesses amounted in 1903-4 to 1·9 lakhs. HASSAN ABDĀL is a place of historical interest.

Attock Town (*Atak*).—Fort and temporary head-quarters of the *tahsīl* of the same name in Attock District, Punjab, situated in 33° 53′ N. and 72° 15′ E., on the North-Western Railway and the grand trunk road; distant by rail 1,505 miles from Calcutta, 1,541 from Bombay, and 882 from Karāchi. Population (1901), 2,822. The fort rises in three tiers to a commanding height above the Indus, just below the point where it receives the Kābul river. Opposite it a whirlpool eddies between two jutting precipices of black slate, known as Kamālia and Jalālia, from the names of two Roshānia heretics, who were flung from their summits during the reign of Akbar. The buildings of the town formerly stood within the fort, but have been removed to a site on one side of it. The fort, which commands the passage of the Indus, is garrisoned by two companies of garrison artillery and a detachment of infantry.

Alexander is supposed to have crossed the Indus by a bridge of boats at Ohind, 16 miles above Attock. The fort was built by Akbar in 1581, to protect his empire against the inroads of his brother, Hakīm Mirza, governor of Kābul; and he named it Atak-Banāras in contrast to Katak-Banāras, the fort which lay in the south-east corner of his empire. Another story goes that Akbar, finding the Indus impassable, named the fortress Atak, 'the obstacle,' and that when he effected a crossing he founded Khairābād, 'the abode of safety,' on the western bank of the river. In 1812 Ranjīt Singh surprised the fort, which was in the possession of the Wazīr of Kābul. In the first Sikh War it was taken by the British, but lost in the second despite a long and gallant defence by Lieutenant Herbert. It returned to British occupation at the end of the second Sikh War. The road and railway bridge over the Indus were completed in 1883. Attock is administered as a 'notified area.' The income and expenditure of cantonment funds during the ten years ending 1902-3 averaged Rs. 249 and Rs. 216 respectively.

Atūr Tāluk.—*Tāluk* of Salem District, Madras, lying between 11° 19′ and 11° 53′ N. and 78° 16′ and 78° 51′ E., with an area of 841 square miles. The western part is broken by numerous rocks and hills; but the east forms a wide undulating plain, separated by the valleys of the Vasishtanadī and Swetanadī rivers from the mountain

ranges of the Tenandamalai and Kalrāyans on the north and the Kollaimalais and Pachaimalais on the south. The valley irrigated by these rivers is a rich tract of country, and the luxuriant groves of areca palms are a striking feature of the river banks. The population in 1901 was 199,475, compared with 183,209 in 1891. There are 173 villages, and only one town, ATŪR (population, 9,673), the head-quarters. The demand for land revenue and cesses in 1903-4 amounted to Rs. 3,17,000.

Atūr Town.—Head-quarters of the *tāluk* of the same name in Salem District, Madras, situated in 11° 35′ N. and 78° 37′ E., on the river Vasishtanadī, about 3 miles from the foot of the Kalrāyan Hills. Population (1901), 9,673. North of the town stands the old fort, where the famous eighteenth-century chieftain Ghetti Mudaliyār is said to have lived in royal state, and where subsequently British troops were in garrison. As commanding the pass from Salem to Tyāga Drug, this post was of importance in the wars with Haidar Alī. It was captured by the British in 1768, after the surrender of Salem; and during the war with Tipū was again occupied by British troops. Indigo is manufactured, and the place is also known for the carts made here.

Augar.—British cantonment in Gwalior State, Central India. *See* AGAR.

Aundh.—Native State in the Sātāra Political Agency, Bombay. *See* SĀTĀRA AGENCY.

Auniāti.—Village in Sibsāgar District, Eastern Bengal and Assam, situated in 26° 53′ N. and 94° 5′ E., on the right bank of the Brahmaputra in the MAJULI island. It contains the principal Vaishnavite *sattra*, or priestly college, in Assam, and its Gosain, or head priest, exercises great influence over the Assamese. The Gosains have always been distinguished by their loyalty to Government, and render a real service to the administration by encouraging purity of life and obedience to the authorities. The *sattra* is said to have been founded in the sixteenth century, and is supported by the offerings of its numerous disciples and by grants of revenue-free land made by the Ahom Rājās and confirmed by the British Government, which cover in all nearly 22,000 acres. The college consists of a large prayer hall, surrounded by lines of barracks inhabited by celibate monks, and contains a printing press. None of the buildings is of masonry.

Aurād.—Former *tāluk* of Bīdar District, Hyderābād State. *See* KĀRĀMUNGI.

Auraiyā Tahsīl.—*Tahsīl* of Etāwah District, United Provinces, conterminous with the *pargana* of the same name, lying between 26° 22′ and 26° 41′ N. and 79° 3′ and 79° 39′ E., with an area of 416 square miles. Population increased from 172,097 in 1891 to 193,333 in 1901. There are 408 villages and two towns: PHAPHŪND (population, 7,605)

and AURAIYĀ (7,393), the *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 3,31,000, and for cesses Rs. 53,000. The density of population, 465 persons per square mile, is a little below the District average. The *tahsīl* is divided into four tracts by the rivers Sengar, Jumna, and Chambal. Most of it is included in the *ghār*, an area lying between the Sengar and Jumna. This has a light sandy soil, which is, however, fertile where irrigated, and it is crossed by the Bhognīpur branch of the Lower Ganges Canal. North of the Sengar the land is richer and is irrigated chiefly from wells. The high land bordering on the Jumna is intersected by ravines and is generally barren, while south of the Jumna the soil is poor and gravelly, except near the rivers, where some good alluvial land is found. In 1903-4 the area under cultivation was 238 square miles, of which 82 were irrigated, almost entirely from canals.

Auraiyā Town.—Head-quarters of the *tahsīl* of the same name in Etāwah District, United Provinces, situated in 26° 28′ N. and 79° 31′ E., 42 miles from Etāwah town. It lies on the old imperial road from Agra to Allahābād, at the point where this is crossed by the metalled road from Jālaun to Debiāpur-Phaphūnd station on the East Indian Railway. Population (1901), 7,393. The town is said to have been founded early in the sixteenth century, and contains some Hindu temples dating from a little later, and two mosques built by a Rohilla governor in the eighteenth century. It also possesses some good *sarais*, a fine market-place called Humeganj, after a former Collector, and a dispensary. It is administered under Act XX of 1856, with an income of about Rs. 2,500. Trade is increasing, especially with Gwalior and Jālaun, and the bazar has recently been extended towards the south. There is one cotton gin, employing 200 hands in 1903, and a second was completed at the end of that year. The town school has about 200 pupils, and an aided primary school 25.

Aurangābād Division.—North-western Division of the State of Hyderābād, lying between 18° 28′ and 20° 40′ N., and 74° 40′ and 78° 6′ E. The head-quarters of the *Sūbahdār* (Commissioner) are at Aurangābād city. The total population of the Division increased from 2,610,247 in 1881 to 2,909,561 in 1891, but decreased to 2,363,114 in 1901, owing to the drought and famine in the two preceding years. The total area is 19,071 square miles; and the density is 124 persons per square mile, compared with 135 for the whole State, this Division being the third largest in area and the fourth in population. In 1901 the population consisted of 89 per cent. Hindus, 10 per cent. Musalmāns, 2,846 Christians (of whom 2,613 were natives), 12,477 Jains, 256 Pārsīs, 2,563 Sikhs, and 9,380 Animists.

The number of towns in the Division is 20, or about one-quarter of the total number in the Dominions, and there are 5,490 villages.

The largest towns are AURANGĀBĀD CITY (population, 36,836 with cantonment) and JĀLNA (20,270 with cantonment). The chief places of commercial importance are AURANGĀBĀD, JĀLNA, KĀDIRĀBĀD, NĀNDER, BHĪR, AMBA, and PARLI. Aurangābād is notable as having been the head-quarters of Aurangzeb when he was viceroy of the Deccan. His tomb is at KHULDĀBĀD (Rauza), whither his body was conveyed after his death at Ahmadnagar in 1707. Khuldābād also contains the tombs of Malik Ambar, the famous minister of the Nizām Shāhi kings of Ahmadnagar, and of Abul Hasan (Tāna Shāh), the last of the Kutb Shāhi house, who was made prisoner by Aurangzeb in 1687.

The territorial changes made in 1905 materially affected two Districts in this Division, Parbhani and Nānder. The following table shows the revised area, population, and land revenue of the four Districts now comprising the Division:—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1901, in thousands of rupees.
Aurangābād	6,172	721,407	24,16
Parbhani	5,433	696,765	23,42
Nānder	3,612	550,148	15,84
Bhīr	4,460	492,258	15,37
Total	19,677	2,460,578	78,79

Aurangābād District.—District in the extreme north-west of the Hyderābād State, lying between 19° 18′ and 20° 40′ N. and 74° 40′ and 76° 40′ E., with an area of 6,172 square miles. It is bounded on the north, west, and south by the Bombay Districts of Khāndesh, Nāsik, and Ahmadnagar, and by the Bhīr District of Hyderābād; and on the east by the Buldāna District of Berār and the Parbhani District of Hyderābād. Aurangābād may be divided into the Bālāghāt or 'uplands' to the north, and the Pāyānghāt or 'lowlands' to the south, the latter terminating in the valley of the Godāvari. The northern hills are a continuation of the Bālāghāt of Berār, and are named Sātāra, Ajanta, Kannad, &c., after villages in their proximity. The Mahādeo range, a continuation of the Sātāras, is 2,772 feet above the sea. All the hills in the District have a terrace-like appearance with flattened summits. One range, about 2,400 feet high, extends from Khānāpur to Jālna, passing through Aurangābād and Daulatābād, being 3,022 feet high near the latter. The Sarpanāth hill in the Baiamahāl range is 3,517 feet above the sea. The Gaotālā hills, also known as the Ajanta and Sātmālā, form the northern limits of the plateau, running east and west for 70 miles.

Physical aspects.

The most important river is the Godāvari, which forms the southern

boundary for about 127 miles, separating the District from Ahmadnagar and Bhīr. Its principal tributaries are the Sina rising in the Kannad hills, the Dhenda rising near Daulatābād, and the Dudna flowing from the hills east of Aurangābād. The general slope of the country is towards the south and south-east.

The District is situated within the Deccan trap area. In the valley of the Godāvari and some of its tributaries the trap is overlaid by gravels and clay beds of upper pliocene or pleistocene age, containing fossil bones of extinct mammalia. The famous caves of AJANTA and ELLORA have been carved out of the basalt beds of the Deccan trap.

Jungles of the larger vegetation clothe the slopes of the hills surrounding the Bālāghāt and the ravines of streams issuing from the highlands. The gorges of the Ajanta and Gaotālā *ghāts* are well wooded.

The animals found in the District include antelope, wild hog, bears, wild dogs, and wolves, and occasionally tigers and leopards.

The climate is generally healthy, but during the rains and part of the cold season it is malarious. The Bālāghāt is dry and healthy, its mean temperature for the whole year being 80°. The pleasantest spot in the District is Rauza or Khuldābād, on the hills south-east of the caves of Ellora, where the temperature in the height of the hot season does not exceed 82°.

The rainfall during the twenty-one years ending 1901 averaged 25 inches. The District suffered severely from scanty rainfall (12 inches) and famine during 1899–1900.

History.

The District is of great importance in the early history of the Deccan. Long before the Christian era PAITHAN was probably an important place. From Ptolemy's account of India it appears that Paithan was the capital of Pulumāyi II, the Andhra king (A.D. 138–170), whose rule extended across the peninsula. With the decay of the Andhra power in the third century a period commences of which nothing is known, but the country must have fallen under the sway of the Chālukyas three hundred years later, and was ruled by them for a long period. In the seventh century Hiuen Tsiang visited the caves of Ajanta, Pulikesin II being king at the time. About 760 the Chālukyas were conquered by the Rāshtrakūtas, one of whose rulers, Krishna I, constructed the wonderful rock-cut temple of Kailās at ELLORA. In 973 the Rāshtrakūtas were overthrown and Chālukya power was restored, but not to its former glories. Among the feudatories of the Chālukyas were the Yādavas, or perhaps more correctly the Seunas. A long list of chiefs has been collected, commencing from the early part of the ninth century; but the first independent ruler was Bhillama I, who established himself about 1187 in the country between Daulatābād and Nāsik, with his capital at the former place, then known

as Deogiri. He died fighting the Hoysala ruler of Mysore in 1191; but his grandson Singhana extended the kingdom from Khāndesh on the north to Mysore on the south, so that it practically included the whole of the Western Chālukyan dominions. Singhana also invaded Gujarāt, and claims to have conquered practically the whole of India. In 1294, however, Alā-ud-dīn invaded the Deccan and defeated Rāmchandra, the last of the independent Yādavas, close to his capital, securing an enormous booty and the promise of tribute. Owing to default in the payment of the latter, Malik Kāfūr was dispatched to invade the Deccan again in 1307, and Rāmchandra yielded without a struggle. The default of his son and successor led to further expeditions, and in 1318 Harpāl, the last ruler, was flayed alive, and the Yādava power was finally extinguished. From 1347 the District formed part of the Bahmani kingdom, and in 1499 it was included in Ahmadnagar. In 1600 the Mughals under prince Dāniyāl captured Ahmadnagar after the murder of Chānd Bībī. Malik Ambar, the Ahmadnagar minister, fought several battles with the Mughals, and in 1610 founded Kharki, the present Aurangābād, which he made his capital. After his death in 1626, Ahmadnagar and Aurangābād were annexed to the Mughal empire, but the District was separated from it on the foundation of the Hyderābād State in the beginning of the eighteenth century.

The most important cave-temples in India are found in the neighbourhood of ELLORA, AURANGĀBĀD, and AJANTA, belonging to the Buddhist, Jain, and Brāhmanical styles of architecture. Those at Ajanta number 29 and contain exquisite paintings, while 11 miles west of Ajanta are the two Ghatotkach caves. North of the city of Aurangābād are twelve Buddhist caves. The Ellora series contain some of the largest and most elaborately carved caves, dating from the second century B.C. to the eighth century A.D. The great fort at DAULATĀBĀD is a remarkable building. Aurangābād, Daulatābād, and JĀLNA contain numerous Muhammadan buildings, but none of great importance. The village of KHULDĀBĀD is marked by the tombs of several historical persons, including the emperor Aurangzeb and Asaf Jāh, the founder of the Hyderābād State.

Population.

The number of towns and villages is 1,831. The population at each Census in the last twenty years was as follows:—(1881) 730,380, (1891) 828,975, and (1901) 721,407. The great famine of 1899–1900 is responsible for the decrease of population in the last decade. The District is divided into the ten *tāluks* of AURANGĀBĀD, AMBARH, JĀLNA, KANNAD, BHOKARDAN, PAITHAN, GANGĀPUR, VAIJĀPUR, SILLOD, and KHULDĀBĀD, the last two being *sarf-i-khās* or 'crown' *tāluks*. The towns are AURANGĀBĀD, JĀLNA, KĀDIRĀBĀD, PAITHAN, and VAIJĀPUR. Nearly 85 per cent. of the population are Hindus and more than 12 per cent. Musalmāns. About

79 per cent. of the people speak Marāthī. The following table shows the distribution of population in 1901:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Aurangābād	563	1	204	99,007	175	− 8.0	Not available.
Sillod	216	...	46	26,966	125	− 16.0	
Bhokardan	425	...	142	37,311	88	− 30.0	
Jālna	618	2	167	86,750	140	− 13.0	
Ambarh	866	...	218	97,271	112	− 13.0	
Paithan	380	1	130	52,552	138	− 0.1	
Gangāpur	453	...	175	46,959	103	− 14.0	
Vaijāpur	519	1	113	43,757	84	+ 2.0	
Kannad	541	...	168	59,190	109	+ 7.2	
Khuldābād	97	...	29	10,115	104	− 11.3	
Jāgīrs, &c.	1,494	1	433	161,529	108	− 9.6	
Total	6,172	6	1,825	721,407	116	− 12.9	23,171

In 1905 a few small transfers were made, by which the area and population of individual *tāluks* have been changed.

The agricultural castes include the Marāthā Kunbīs, 257,000, and also Sindes, 15,900; Banjārās, 8,900; Kolīs, 7,000; and Marāthā Holkars, 5,800. The Mālis or gardeners number 18,600. The Mahārs (village menials) and Māngs (leather-workers) number 66,800 and 21,500; Dhangars or shepherds, 31,000; Brāhmans, 28,000. Vānīs, 4,600, and Mārwāris, 7,800, are the principal trading castes. About 46 per cent. of the population depend on agriculture.

The District contained 2,673 Christians in 1901, of whom 2,512 were natives.

Agriculture.

The soils are of three kinds: the *regar* or black cotton soil, the *masab* or reddish, and the *milwa*, a mixture of the other two. *Regar* is derived from trap, and the sandy or reddish soils from granitic rock. The *regar* constitutes over 55 per cent. of the total cultivable area, and is very fertile, as also are the soils found at the foot of the hills.

Khālsa land measured 4,678 square miles in 1901, of which 3,727 were cultivated, 82 were occupied by cultivable waste and fallows, 392 by forests, and 477 were not available for cultivation. The cultivated area in 1903 was 3,732 square miles. *Jowār*, *bājra*, and wheat are the chief food-crops, covering an area of 991, 535, and 258 square miles respectively. Pulses and rice are next in importance, with areas of 497 and 19 square miles. Cotton and oilseeds are largely grown, occupying 384 and 409 square miles respectively. Sugar-cane is grown on about 9 square miles.

The cattle are of the ordinary Deccani breed, being small, hardy, and active, and well adapted for agricultural operations. The valley of the Godāvari was once famous for its breed of horses, noted for their hardiness and powers of endurance, and said to be the offspring of Arab sires; but the stock is now inferior. The State maintains Arab stallions at Aurangābād and Ambarh for improving the breed. The sheep are of the usual black breed. There are two varieties of goats: the Gujarāt short-legged breed, with erect ears, which are good milkers; and the shaggy long-legged breed, with drooping ears.

The irrigated area in 1901 was 134 square miles, entirely supplied from wells, of which 19,778 are in working order. There are a few small tanks, but they are used only for drinking purposes.

The forest area is small, comprising only 123 square miles of 'reserved,' and 69 and 200 square miles of protected and unprotected forests respectively. Teak (*Tectona grandis*) is the predominant species among the timber trees, while the *sādora* (*Terminalia tomentosa*), *dhāmora* (*Anogeissus latifolia*), and *mālanjar* (*Hardwickia binata*) are fairly plentiful. A considerable portion of the forests contains only brushwood and small trees used for fuel, which is given free of charge to the cultivators.

Very few minerals of economic value are met with; those found are jaspers, agate, carnelian, chalcedony, heliotrope, and rock crystals, both white and amethystine. *Kankar* or nodular limestone, basalt, and granite occur all over the country, and are utilized for building purposes.

Trade and communications.

AURANGĀBĀD CITY is noted for its silver ware and embroidery, as well as for silver and gold lace and cloth (*kamkhwāb*), and other silk cloths known as *himrū* and *mashrū*, which are largely produced. Valuable silk and cotton *sārīs* and other silk fabrics are made at PAITHAN and JĀLNA. Paper of several descriptions is manufactured at Kāghazīpura, near Daulatābād. Saltpetre is produced in small quantities from saline earth gathered near villages and old walls. In 1889 a cotton-spinning and weaving-mill was erected in Aurangābād city, which employs 700 hands daily. Since the opening of the Hyderābād-Godāvari Valley Railway in 1900 several ginning factories have been started. In the Jālna *tāluk* alone there are 9 cotton-ginning factories and 5 cotton-presses, besides two ginning factories at Aurangābād and Kannad, and one oil-press at Aurangābād. The total number of hands employed in the cotton-presses and ginning factories in 1901 was 1,016.

The chief exports consist of cotton, food-grains, oilseeds, dyes, live-stock, silk stuff, cloth, hides, tobacco, jaggery (raw sugar), *ghī*, paper, silver ware, copper and brass vessels; the principal imports are food-grains, chiefly rice, salt, opium, cloth, English piece-goods, yarn, sugar,

kerosene oil, fruit, raw silk, spices, copper and brass vessels, iron, silver and gold, jewels, paper, hardware, and sulphur. The principal trade centres are Aurangābād city, Jālna (*Pett* Kādirābād) and Paithan. The Vānīs, Bohrās, Bhātias, and Memons from Bombay are the chief traders. Internal trade is carried on by means of weekly markets, held at eighty places in different parts of the District.

The Hyderābād-Godāvari Valley Railway traverses Aurangābād from west to east, for 110 miles, with eleven railway stations within the District.

The total length of main roads is 392 miles, of which 154 are metalled. The District is also well supplied with numerous fair-weather roads leading to the head-quarters of *tāluks*, their length being 454 miles, making a total of 846 miles of metalled and fair-weather roads and cart tracks. There are several *ghāts* or mountain passes, the chief being those of Ajanta, Upli near Daulatābād, and Ellora.

Famine.

From the second quarter of the nineteenth century up to 1872, there were six years of distress and famine in the District, attended by much loss of cattle. In 1876 the rains failed almost completely, the fall in the previous year also having been deficient. In 1878 the *kharīf* crop was damaged by excessive rain, and the *rabi* crops suffered from rats. In 1897 the number of persons relieved was 267,318, costing Rs. 68,000. The ryots had not recovered from the effects of the distress of 1897 when the great famine of 1899–1900 took place. Owing to the scanty rainfall of 1899 and 1900 (12 and 19 inches), both the *kharīf* and *rabi* crops of these two years failed, and severe distress was felt in all parts. While the famine was raging, cholera supervened and carried off thousands. The District lost 76,000 agricultural and 74,000 non-agricultural cattle, or 38 and 37 per cent. respectively of the total. The total number of units relieved was 19 millions, and the highest attendance in famine camps in one day was about 58,000, the total cost to the State amounting to 17·4 lakhs.

Administration.

There are three subdivisions, the first consisting of the *tāluks* of Jālna, Sillod, Ambarh, and Bhokardan; the second, of Vaijāpur, Gangāpur, Paithan, and Kannad; and the third, of Aurangābād and Khuldābād. The first two subdivisions are each under a Second Tālukdār and the third under a Third Tālukdār, each of the ten *tāluks* being under a *tahsīldār*.

The First Tālukdār is the chief magistrate, and the *Nāzim-i-Dīwāni* or District Civil Judge is also a joint magistrate, who exercises magisterial powers in the absence of the First Tālukdār from head-quarters. There are three Munsifs' courts—at Aurangābād, Jālna, and Gangāpur. The Second and Third Tālukdārs exercise second-class, and the *tahsīldārs* third-class criminal powers. The *Nāzim-i-Sūbah*, or the Judge of the Division, one of the puisne judges of the High Court, holds his court at

Aurangābād. Serious crime is not heavy in ordinary years, but has shown a tendency to increase in seasons of scarcity. The Bhīls gave much trouble during and immediately after the famine of 1900.

Authentic records of the revenue history of the district exist from the time of Malik Ambar early in the seventeenth century, who had the whole country surveyed, and fixed the revenue according to the productiveness of the soil in each tract. Prior to 1866, the villages were farmed out, the revenue contractors being allowed 10 per cent. for collection; but on the introduction of administration by Districts in 1866, Tālukdārs and *tahsīldārs* were regularly appointed, and the *ryotwāri* system with cash payments was introduced. The revenue survey was started in 1876 and completed in 1882, the assessments being fixed for thirty years. The survey showed that the area of holdings was larger by 18 per cent. than that shown in the accounts. The average assessment on 'dry' land is Rs. 1-14 (maximum, Rs. 2-6; minimum, R. 1), and on 'wet' land Rs. 5 (maximum, Rs. 6; minimum, Rs. 4).

The land revenue and the total revenue for a series of years are shown below, in thousands of rupees:—

	1881.	1891.	1901.	1903.
Land revenue . .	16,70	20,91	22,61	22,63
Total revenue . .	18,17	23,15	38,70	25,25

Both Aurangābād city and the adjoining cantonment are administered as municipalities. The District board, in addition to its own work, manages the city municipality, and also supervises the working of the *tāluk* boards, and is presided over by the First Tālukdār. The cantonment municipality is managed by the cantonment authorities. For each of the *tāluks*, except Aurangābād, there is a *tāluk* board and a small municipal establishment. The principal source of income is the one anna cess, which yielded 1·5 lakhs in 1901, while the total expenditure was 1·8 lakhs, including local works as well as municipal expenditure.

The First Tālukdār is the head of the District police, with a Superintendent (*Mohtamim*) as his executive deputy. Under the latter are 12 inspectors, a frontier assistant, 79 subordinate officers, 738 constables, and 34 mounted police. These are distributed among 37 police stations and 42 outposts (*thānas* and *chaukīs*), and also guard the District and *tāluk* treasuries. Rural police are appointed at the rate of one man to every fifty houses in the villages, and are under the police *pātel* and subordinate to the *jemadār* of the nearest police station.

There is a Central jail at Aurangābād, with accommodation for 2,000 prisoners. It receives convicts sentenced to more than six months, imprisonment from Bhīr, Parbhani, and Nānder. Carpets, rugs, cotton

tweeds and other kinds of cloth, as well as boots, harness, and belts, are made here.

Aurangābād District takes a comparatively high position as regards the literacy of its population, of whom 3·2 per cent. (6 males and 0·3 females) could read and write in 1901. The total number of pupils under instruction in 1881, 1891, 1901, and 1903 was 1,087, 3,926, 5,648, and 5,054 respectively, including 214 girls in the last year. In 1903 there were 92 primary and 4 middle schools, one high and one industrial or art school, and one college. Of these institutions 11 were private and the remainder State. The total expenditure on education in 1901 was Rs. 44,100, of which Rs. 27,300 was contributed by the State and Rs. 16,800 by Local boards. The fee receipts amounted to Rs. 3,100.

In 1901 the District contained six dispensaries, including one *yūnāni* institution, having accommodation for 37 in-patients. The number of out-patients treated in 1901 was 45,827, and of in-patients 242. The operations performed numbered 1,503. The expenditure amounted to Rs. 22,400, of which Rs. 3,800 was contributed from Local funds.

The number of persons vaccinated in 1901 was only 2,873, or about 4 per 1,000 of the population.

[J. Fardunji, *Notes on the Aurangābād Agriculturist.*]

Aurangābād Tāluk.—Central *tāluk* of Aurangābād District, Hyderābād State, with an area, including *jāgīrs*, of 786 square miles. The population in 1901 was 121,121, compared with 131,582 in 1891, the decrease being due to the famines of 1897 and 1899–1900. The *tāluk* contains one town, AURANGĀBĀD CITY (population, 36,837), the head-quarters of the Division, District, and *tāluk*; and 270 villages, of which 66 are *jāgīr*. The land revenue in 1901 was 2·6 lakhs. The *tāluk* is hilly in the north, and is composed of black cotton soil. The *paigāh tāluk* of Lādsāngvi, with 7 villages and a population of 2,230, lies to the north-east of this *tāluk*, and has an area of about 19 square miles.

Aurangābād City.—Head-quarters of the Division, District, and *tāluk* of the same name in Hyderābād State, situated in 19° 53′ N. and 75° 20′ E., on the Hyderābād-Godāvari Valley Railway, near the eastern bank of the river Kaum. In point of historical interest and size it is the second city in the State, and its population at the last three enumerations was as follows: (1881) 30,219, (1891) 33,887, and (1901), 36,837, including cantonments. In 1610 Malik Ambar, minister of the Nizām Shāhi kings of Ahmadnagar, founded the city near the village of Kharki, and called it Fatehnagar. The Mughals and the Nizām Shāhi troops under Malik Ambar were constantly at war during the early part of the seventeenth century. After the death of Malik Ambar in 1626, the power of the Ahmadnagar rulers declined, and in 1637 their territories were incorporated in the Deccan *Sūbah*

of the Mughal empire. Aurangzeb was appointed viceroy of the Deccan in 1635, and again in 1653, and during his residence at Kharki changed its name to Aurangābād. It was from here that he directed his earlier campaigns against the Marāthās and the Bijāpur and Golconda kingdoms. In 1658 he dethroned and imprisoned his father, Shāh Jahān. A few years later he undertook the subjugation of the Muhammadan kingdoms of the Deccan, and commenced his wars with the Marāthās, in which he was almost continuously engaged until his death, at Ahmadnagar, in 1707. Bijāpur fell in 1686, and Golconda, the Kutb Shāhi capital, in 1687, these victories being followed by the annexation of the two kingdoms. During the confusion and internal dissension which followed the death of Aurangzeb, Asaf Jāh, the first Nizām, came to Aurangābād, and having declared his independence, subsequently made Hyderābād his capital.

The city is bounded on the north and south by the Sichel and Sātāra ranges. During the reign of Aurangzeb its population is said to have been not less than 200,000, and the ruins still existing bear testimony to its former populousness. The modern city is situated to the east of Old Aurangābād, while the cantonment lies to the west, across the Kaum river. The garrison consists of two regiments of native infantry, and one of native cavalry, four squadrons strong, under the command of British officers.

In 1853 Aurangābād was the scene of a sharp conflict between the Hyderābād Contingent and a body of Arabs, who were defeated. In the eventful year 1857 some of the troops showed a spirit of disaffection, and an attack was meditated upon the cantonment. The authorities at Hyderābād had been apprised of this, and troops from Poona were ordered to march to Aurangābād. When the Poona troops arrived under General Woodburn, the disaffected cavalry were summoned to a dismounted parade. On the names of the ringleaders being called out, a *jemadār* ordered his men to load their carbines. A scene of wild confusion ensued, and some of the troops profiting by it mounted their horses and fled, and, though pursued by the 14th Dragoons from Poona, they escaped. Two-thirds of the regiment remained loyal; a court martial was held and twenty-one of the condemned were shot, while three were blown away from guns.

At Aurangābād the *Sūbahdār* (Commissioner), the *Nāzim-i-Sūbah* (Divisional Judge), the First Tālukdār, and other officers hold their courts. The public buildings include a large Central jail, a college, an industrial school, and several smaller schools. The city is an important centre of trade; and silk, gold and silver cloth, and lace of a superior quality are manufactured here and largely exported. A spinning and weaving-mill gives employment to 700 persons, besides an oil-press. The city has suffered severely from plague and from

the famines of 1897 and 1900; and but for the opening of the Hyderābād-Godāvari Valley Railway, the country around would have been depopulated. The increase of population in 1901 is due to the immigration of famine-stricken people from the neighbouring villages. A system of water-supply was introduced by Malik Ambar, and completed by Aurangzeb; and though it has largely fallen into decay, it still yields sufficient water to supply the needs of the people. A new system of water-works was opened in 1892, to supply filtered water to the cantonment.

Many places of interest are situated in the city and its suburbs, among which may be mentioned the *makbara* or tomb of Aurangzeb's wife, the Jāma Masjid built by Malik Ambar, the ancient palace of the Nizām near Borapal, and the Kila Ark or citadel, which was Aurangzeb's palace. About 2 miles north of the city are the Aurangābād caves, 12 in number. These are of Buddhist origin, and are among the latest known, while they present especially interesting features.

[*Archaeological Survey Reports of Western India*, vol. iii.]

Aurangābād Subdivision.—Western subdivision of Gayā District, Bengal, lying between 24° 29′ and 25° 7′ N. and 84° 0′ and 84° 44′ E., with an area of 1,246 square miles. The north of the subdivision is a level alluvial tract, but the south is more undulating and contains numerous hills, the outliers of the Chotā Nāgpur plateau. The population in 1901 was 467,675, compared with 472,507 in 1891. The density is 375 persons per square mile, being highest in the north-west where the soil is irrigated by the Son Canals system. It contains two towns, AURANGĀBĀD (population, 4,685), the head-quarters, and DAUDNAGAR (9,744); and 2,042 villages. DEO, the seat of the Deo family, contains a fine stone-built temple; some other interesting antiquities are referred to in the article on GAYĀ DISTRICT.

Aurangābād Town.—Head-quarters of the subdivision of the same name in Gayā District, Bengal, situated in 24° 45′ N. and 84° 23′ E., on the grand trunk road. Population (1901), 4,685. The town contains the usual public offices; the sub-jail has accommodation for fifteen prisoners. The trade consists chiefly of food-grains, oilseeds, leather, and piece-goods.

Aurangābād Saiyid.—Town in Bulandshahr District, United Provinces, situated in 28° 22′ N. and 78° 5′ E., 9 miles north-east of Bulandshahr town. Population (1901), 5,916. It was founded in 1704 by Saiyid Abdul Azīz, who undertook, with the permission of the emperor Aurangzeb, to eject the turbulent Jaroliyās of the neighbourhood. His descendants still own the town. The site is low and surrounded by water during the rains. Aurangābād is administered under Act XX of 1856, with an income of Rs. 2,000. Trade is entirely local. There is a primary school with 50 pupils.

Ausa.—*Tāluk* and town of Osmānābād District, Hyderābād State. *See* OWSA.

Ava (Burmese, *Inwa*).—The old capital of Burma, in the Tada-u township of Sagaing District, Upper Burma, situated in 21° 51′ N. and 96° E. The remains of the old city lie at the junction of the Myitnge (Doktawaddy) with the Irrawaddy, the city having been built on a triangular island artificially formed by a channel called the Myittha *chaung*, which was dug from the Myitnge to the Irrawaddy. The few houses left are now scattered about in more than two dozen hamlets, inhabited by colonies of lacquerers, weavers, and other artisans, some without, some within, the old walls. The city stood at the north-east corner of the island. The outer wall is surrounded by a moat, open towards the Myitnge on the east but closed on the north towards the Irrawaddy. The inner or palace wall has a second similar moat round it. Of the old palace nothing is left but one shaky brick tower, very much out of the perpendicular, and not likely long to remain standing. The walls, both outer and inner, are still very solid and substantial, and give some idea of the aspect that Ava in its palmy days must have presented; but they have now been nearly swamped by a sea of undergrowth. The area between the inner and outer wall is filled with stretches of cultivated land, scattered hamlets, *kyaungs*, and enormous jungle-clad masses of bricks that were once pagodas. Much of this area and all the space within the inner walls are extremely picturesque. The numberless fine old tamarind-trees of huge size, the level green swards, the profuse vegetation, half hiding the thatched hamlets, the massive old walls and ruined shrines, the cleared vistas, make up a scene which suggests a park rather than the site of an old capital. The view across the river to Sagaing, up stream to Mandalay, and eastwards over the Amarapura plains to the Shan Hills is unequalled on the Irrawaddy.

The principal pagodas are the Lawkamanaung, the Yatanamanaung, the Zinamanaung, the Tuthamanaung, and the Ngamanaung, built by king Sanemintayāgyi in the year 306 B.E. (A.D. 944); and the Shwezigon, built by king Mingyizwa Sawke in the year 529 B.E. (1167).

Founded by king Thadominpayā in the middle of the fourteenth century, after the final collapse of the Pagan dynasty, Ava was for many years the capital of one of the kingdoms that struggled during the middle ages for the mastery in Burma. During the fourteenth and fifteenth centuries the king of Ava was constantly either invading the territory of the Talaings or resisting Peguan attacks on his own kingdom; and more than once during that period Ava saw Shan kings reigning within her gates, and Chinese armies encamped before her walls. In the sixteenth century the Toungoo dynasty rose to power, and in 1554 Bayin Naung, king of Toungoo, laid siege to and took the Burmese capital. The fortunes of the town were at a low ebb

during the last half of the sixteenth and the early years of the seventeenth century, but in 1636 it became the capital of an empire which then included Pegu and the greater part of what is now Burma. The Peguans, however, revolted about the middle of the eighteenth century and shook off the Burmese yoke, and in 1752 Ava was captured by a Talaing army and burnt to the ground. It was not long before Alaungpayā had turned the tables on the Talaing conquerors; but that monarch made his own capital at Shwebo, and Ava did not become the head-quarters of government again till 1766, when Sinbyushin, one of Alaungpayā's sons, rebuilt the palace and moved his court there. The town did not long remain the capital, however. A few years later Bodawpayā built a new city at Amarapura, and the court and its following migrated there in 1783. Bagyidaw, Bodawpayā's grandson, moved the seat of government back to Ava in 1822; and the town was the capital of Burma during the first Burmese War, and was the objective of the British troops in their advance up the Irrawaddy in 1826. It was Bagyidaw's successor, Tharrawaddy, who finally abandoned the city as the capital, and established himself at Amarapura, and since 1837 no Burmese monarch has resided in Ava.

Preparations were made at Ava to arrest the advance of the British up the Irrawaddy at the time of the annexation of Upper Burma in 1885; steps were taken by the Burmans to block the channel of the river opposite the town and troops were collected, but the resistance collapsed. Ava was for some time after the annexation the headquarters of a separate District, which was, however, before long absorbed into Sagaing District.

Avachar.—Petty State in the DĀNGS, Bombay.

Avani.—Sacred village and hill in the Mulbāgal *tāluk* of Kolār District, Mysore, situated in 13° 6′ N. and 78° 20′ E. Population (1901), 949. The region is said to be Avāntikakshetra, one of the ten places of greatest sanctity in India. Vālmīki is believed to have lived at Avani, and Rāma to have encamped here on his return from Ceylon. Inscriptions call it the 'Gayā of the South.' There is a group of temples dedicated to Rāma and his brothers, and many old inscriptions have been found. Avani was ruled for forty years to 961 by Tribhuvanakartar-Deva, who built fifty temples and made tanks. It is the residence of a *gurū* of the Smārta sect, and the scene of a great annual festival and fair.

Avanti.—Old name of UJJAIN, Gwalior State, Central India.

Avāsgarh.—Former name of BARWĀNĪ STATE, Central India.

Avati.—Village in the north of the Devanhalli *tāluk* of Bangalore District, Mysore, situated in 13° 18′ N. and 77° 43′ E. Population (1901), 1,226. The name is properly Ahuti. It is of interest as being the original settlement of the seven enterprising farmers of the Morasu

Wokkal tribe, who migrated here from the east about the end of the fourteenth century, and founded States in the east of the Mysore country, tributary to Vijayanagar.

Awa Estate.—A large estate situated in the Districts of Etah, Alīgarh, Mainpurī, Agra, and Muttra, United Provinces, with an area of 265 square miles. The land revenue payable to Government in 1903–4 was 3·3 lakhs, and cesses amounted to Rs. 51,000; the rent-roll was 7·3 lakhs. A small area in Muttra is revenue-free. The family annals commence in the early part of the eighteenth century when Chaturbhuj, a Jādon Rājput, migrated from Chhāta in Muttra District to Jalesar, and was employed as physician by the local governor. His son, Bijai Singh, obtained a small military command; and the family gained local influence by assisting the *zamīndārs* of adjacent villages, who were involved in pecuniary difficulties. Bakht Singh, son of Bijai Singh, was for a time in the service of Jawāhir Singh, Rājā of Bharatpur, and obtained a number of villages, the profits from which enabled him to enlist a troop of marauding Mewātīs. The Marāthās allowed him to build a fort at Awa. During the Marāthā Wars the head of the family aided Lord Lake, and in 1803 was confirmed in the estate he held. When the Mutiny broke out in 1857 the District officer made over the *pargana* of Jalesar to the Rājā, and requested him to show his loyalty by maintaining Government authority. The confidence was well repaid; the Rājā raised troops, attacked the insurgent villages, collected the revenue, and remitted it to Agra. The present Rājā, Balwant Singh, C.I.E., who was for some time a member of the Legislative Council of the United Provinces, takes a keen interest in the management of his estate. JALESAR is the principal town in the estate, and a cotton gin and press, with the latest machinery, have recently been opened there. The Rājā's residence is at Awa, a small place in Etah District, 14 miles from Etah town, on a metalled road, with a population (1901) of 2,823. The fort, situated close to the town, is a formidable stronghold, built of mud and brick, and surrounded by a deep moat nearly a mile in circumference. Awa is administered under Act XX of 1856, with an income of about Rs. 900. The town contains a dispensary maintained by the Rājā, and a saltpetre refinery is situated close by. The primary school has about 100 pupils.

Ayyampettai.—Town in the District and *tāluk* of Tanjore, Madras, situated in 10° 54′ N. and 79° 12′ E., 11 miles north-east of Tanjore city, with a station on the main line of the South Indian Railway. Population (1901), 9,454. It is one of the chief seats of weaving in the District. Silk cloths, carpets of cotton, wool, and silk, and mats made of rushes are largely manufactured, and block-printing of chintz is carried on to a small extent. There is a particular variety of cloth called *kuttuni* for which Ayyampettai is famous. The number of weavers is, however, very small now as compared with former days.

Ayyankere (or Dodda-Madagkere).—A beautiful lake, surrounded with high hills and studded with islands, situated to the east of the Bābā Budan range in Mysore. It has been formed by embanking the perennial stream of the Gaurihalla, and its outflowing waters are called the Veda, which unites with the Avati to form the Vedāvati river. (*See* Hagari.) The construction of this fine reservoir is attributed to Rukmāngada Rāya, an ancient king of Sakkarepatna. The embankment, of earth and stone, is about 1,700 feet long, and 300 feet high at the rear slope. The tank is very deep, and contains in many parts 35 feet of water. There is a tradition that the bank was once on the point of breaching, when the danger which threatened the town of Sakkarepatna from inundation was announced by the guardian goddess of the lake to Honbilla, the *nīrganti* or waterman. He obtained from her a promise that the catastrophe should be delayed until he returned with orders what to do from his master the king of Sakkarepatna, and hastening to the town delivered warning of the impending danger. The king sagely but inhumanly thought that, under the conditions of the promise, to prevent the return of the messenger would be to avert the catastrophe for ever. He accordingly had him killed on the spot, and the embankment has stood ever since. A shrine has been erected at Sakkarepatna to the memory of the unfortunate man thus sacrificed for its stability, at which worship is still performed. Considerable repairs were made to the embankment in the thirteenth century under the Hoysala kings.

Azamābād-i-Talāwari.—Village in Karnāl District, Punjab. *See* Tirāwari.

Azamgarh District.—Southern District of the Gorakhpur Division, United Provinces, lying between 25° 38′ and 26° 27′ N. and 82° 40′ and 83° 52′ E., with an area of 2,207 square miles, of which 52 square miles were added in 1904. It is bounded on the north by Fyzābād and Gorakhpur; on the east by Balliā; on the south by Ghāzīpur and Jaunpur; and on the west by Jaunpur and Sultānpur.

Physical aspects.

The greater part forms an elevated plain which lies south of the Gogra. Besides the Gogra, the principal rivers are the Tons and Chhotī Sarjū, the former flowing from west to east across the District, while the Chhotī Sarjū flows south-east from the Gogra. Along the Chhotī Sarjū and Gogra are tracts of low alluvial land. The upland area south of the Tons differs from the area between the Tons and the Gogra. The southern tract is made up of a series of narrow parallel sections of country lying east and west. These are separated by lines of swamps which gradually become definite drainage channels. The whole area contains many depressions, which are filled with water in the rains, but gradually dry up. Nowhere does any long continuous expanse of cultivation occur, marshes and saline plains (*ūsar*) interrupting the cropped lands. In the northern portion the water-

courses keep more closely to their channels, and swamps are less frequent, the expanses of cultivation more continuous, and hamlets with their attendant groves more thickly scattered. The Gogra, also known as the Great Sarjū, Deohā, or Dehwā, has a valley varying in width from half a mile to ten miles, and constantly shifts its channel. The Tons after a tortuous course joins the Chhotī Sarjū near the eastern boundary. It is remarkable for the heavy floods which occur in its valley. There are about twenty large lakes or swamps, the principal being the Gamhīrban, Kotail, Jamwāwan, Salonā, Pakrī-Pewā, Narjā, and Ratoī.

The District consists entirely of alluvium, and *kankar* or calcareous lime is the only form of stone. Saline efflorescences are found in many parts.

The flora is that of the Gangetic valley. Few large areas are covered with trees; but near the Tons and other streams there are some patches in which *palās* or *dhāk* (*Butea frondosa*) predominates. In the north mango groves abound; but there are few in the south, especially in the swampy area to the south-west. The alluvial tracts or *kachhār* are, however, the barest of trees.

The wolf, jackal, and fox are common, and wild hog and *nīlgai* are occasionally met with. The rivers and lakes abound in fish, and in the winter are the haunt of geese, duck, and snipe.

The climate is on the whole healthy, though fever is prevalent during the rains and immediately after. With the commencement of the hot season in April westerly winds spring up; but in May the wind changes to the east and the climate becomes very relaxing.

The annual rainfall averages 41 inches, the distribution in different parts of the District being fairly uniform. Variations from year to year are, however, considerable. In 1894 the fall was 68 inches, and in 1896 only 18 inches.

History.

Tradition points to the Bhars, Soerīs, and Cherūs as the aboriginal inhabitants of the District, and asserts that these were superseded first by the Rājputs and then by the Bhuinhārs. When the tide of Muhammadan conquest flowed eastwards, Azamgarh was included in the great kingdom of Kanauj and passed with the neighbouring country under Delhi rule. In the fifteenth century the Sharkī kings of Jaunpur usurped authority over Azamgarh. On the fall of that dynasty, the District was reannexed to the Delhi dominions, and the fort of Sikandarpur was built by, and named after, Sikandar Lodī. In the seventeenth century a family of Gautam Rājputs rose to influence, and before the close of the century they had embraced the faith of Islām and possessed themselves of nearly the whole District as feudatory chiefs. About 1731 Mahābat Khān, head of the family, refused payment of revenue; but after some success in resisting the forces of the Oudh government, he was forced to fly. His successors

gradually lost their estates, and in 1758 Azamgarh became a *chaklā* or district of Oudh till its cession in 1801.

On June 3, 1857, the 17th Regiment of Native Infantry mutinied at Azamgarh, murdered some of their officers, and carried off the Government treasure to Fyzābād. The Europeans fled to Ghāzīpur; but on June 16 two planters, Messrs. Venables and Dunne, returned to Azamgarh, and, troops being sent from Ghāzīpur, the town was reoccupied. On July 18 the civil officers returned, and Mr. Venables attacked the rebels, but was forced back on the town; and on July 28, after the mutiny at Dinapore, all the Europeans returned to Ghāzīpur. The Palwārs held Azamgarh town from August 9 to 25; but they were expelled by the loyal Gurkhas on August 26, and on September 3 the civil officers returned again. On September 20 Benī Mādho and the Palwārs were defeated, and British authority to a great extent re-established. The rebels were driven out of Atrauliā in November; and in January, 1858, the Gurkhas, under Jang Bahādur, marched from Gorakhpur towards Fyzābād, driving the rebels back into Azamgarh. Kuar Singh entered the District in his flight from Lucknow in the middle of February, and was attacked by our troops at Atrauliā; but the latter were repulsed and fell back on Azamgarh, which was besieged by Kuar Singh till the middle of April, when he was defeated by a force under Sir E. Lugard, and the siege raised. Kuar Singh fled, and lost his life in crossing the Ganges; but bands of rebels roamed about attacking the *tahsīlīs* and *thānas* till October, when a force under Colonel Kelly was sent to clear the District.

Ruins of numerous forts exist in many parts, which are locally attributed to the Bhars. A copperplate inscription of Harshavardhana of Kanauj, dated in A.D. 631, was found at Madhuban[1], and an inscription on a tank records its construction in 1144. There are few remains of architectural interest, the chief being an old Rājput fort at Mehnagar.

Population.

In 1901 the District contained 12 towns and 4,688 villages. Population increased considerably between 1872 and 1891; but during the next decade fell by a larger amount than in any other District in the United Provinces. The numbers at the four enumerations were as follows: (1872) 1,317,626, (1881) 1,604,654, (1891) 1,728,625, (1901) 1,529,785. Fever, emigration, and famine are responsible for the decrease between 1891 and 1901. Up to 1904 there were five *tahsīls*—DEOGAON, AZAMGARH, MĀHUL, SAGRĪ, and MUHAMMADĀBĀD—each named from its head-quarters, except Sagrī and Māhul, the head-quarters of which are at Jīanpur and Atrauliā respectively. A sixth *tahsīl*, named GHOSĪ, was constituted in 1904. The principal towns are the municipality of AZAMGARH, the District head-quarters, and MAU and MUBĀRAKPUR. The table on the next page gives the chief statistics of population in 1901.

[1] *Epigraphia Indica*, vol. i, p. 67.

Tahsil.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Deogaon	389	...	702	224,827	578	− 15·1	8,365
Azamgarh	314	2	809	264,114	841	− 8·8	10,167
Māhul	436	2	947	312,234	716	− 9·4	7,966
Sagrī	589	3	1,342	421,740	716	− 10·2	14,815
Muhammadābād	427	5	888	306,870	719	− 14·7	11,415
District total	2,155	12	4,688	1,529,785	710	− 11·5	52,728

The total population has been increased to 1,548,683, by a transfer of 52 square miles from Gorakhpur District in 1904. Details of the alterations will be found in the articles on SAGRĪ, MUHAMMADĀBĀD, and GHOSĪ *tahsīls*. Nearly 86 per cent. of the population are Hindus and 14 per cent. Muhammadans. The density of population is very high, and the District supplies a large number of emigrants. About 94 per cent. of the population speak Bihārī[1].

The most numerous Hindu castes are: Chamārs (leather-workers and labourers), 257,000; Ahīrs (graziers and cultivators), 219,000; Brāhmans, 108,000; Rājputs or Chhattrīs, 99,000; Bhars (labourers), 70,000); Koirīs (cultivators), 60,000; Bhuinhārs (agriculturists), 56,000; Luniās (saltpetre workers and labourers), 52,000; and Baniās, 38,000. More than half of the Musalmāns are included in the two divisions of Julāhās (weavers) and Shaikhs, 54,000 each; while Pathāns number 27,000. Agriculture supports more than 60 per cent. of the total population, and general labour nearly 12 per cent., while weavers form 3 per cent. Rājputs or Chhattrīs own about one-third of the land, Brāhmans one-tenth, and Bhuinhārs one-sixth. The same three castes cultivate one-seventh of the District; Kurmīs, Chamārs, and Ahīrs occupy a large area as tenants, while Koirīs are noted for their skill in the cultivation of the most valuable crops.

In 1901 the District contained 104 native Christians, of whom 48 belonged to the Anglican communion. The Church Missionary Society, which has laboured at Azamgarh since 1818, supports the principal school.

Agriculture.

In the southern portion of the District, which is badly drained, the prevailing soil is clay, chiefly producing rice. In the deeper or central portions of the depressions this becomes almost black from the amount of organic matter which it contains, and the soil is sticky and hard to work. Loam is more common in the northern portion, though clay soil and rice lands are also found there.

[1] For a grammar of the dialect spoken in Azamgarh, see *Settlement Report*, by J. R. Reid, Appendix II.

There are small ravines along the Tons, the soil in which has suffered from denudation. The *kachhār* land contains large stretches of light sandy soil along the Chhotī Sarjū, and sandbanks near the Gogra. These produce but scanty crops, and along the Gogra are often covered with long grass or tamarisk, and are liable to be cut away by the river. Even the more permanent parts of the *kachhār* are exposed to inundation, and this part of the District is less productive than the rest.

The District is held on the usual tenures found in the United Provinces; but a large number of *mahāls* or revenue units are complex, extending over a number of *mauzas* or villages. Proprietary rights are very minutely subdivided. In a few villages inferior proprietors are also found, called *mushakhkhasīdārs*. The main agricultural statistics are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Deogaon	389	182	108	29
Azamgarh	314	185	119	30
Māhul	436	251	149	59
Sagrī	589	347	218	58
Muhammadābād	427	238	146	60
Total	2,155	1,203	740	236

NOTE.—Owing to settlement operations, these statistics are for various years from 1897 to 1901.

The staple food-crops are rice (422 square miles) and barley (359). Peas were grown on 181 square miles; and *kodon*, wheat, *arhar*, gram, maize, and *maruā* are also largely cultivated. Sugar-cane is the most valuable crop (101 square miles); indigo (29) and poppy (10) are also important.

There has been no extension of the net cultivated area in recent years, and the rice lands are so dependent on rainfall that fluctuations are considerable. The most striking change has been the large increase in the area bearing two crops in the same year, which has nearly doubled within the last thirty years. Advances under the Agriculturists' and Land Improvement Loans Acts are rarely taken, except in bad seasons. Out of a total of 1·4 lakhs lent during the ten years ending 1900 more than a lakh was advanced in two years, and only Rs. 2,400 has been lent in four years since 1900.

The cattle bred locally are inferior, and buffaloes are largely used to supply milk. Ponies are also of a poor stamp, and the best are imported. Many of the wealthier *zamīndārs* keep elephants. Sheep are chiefly kept for wool and manure, and goats for milk and flesh.

Out of 740 square miles irrigated, 416 were supplied from wells, 214 from tanks and swamps, and 110 from small streams. The upland area

requires much more irrigation than the *kachhār*, in which even sugar-cane can be grown without irrigation. Artificial tanks number more than 15,000, but all are of small size. The larger rivers are not utilized at all, owing to the cost of raising water; but every natural hollow and swamp which holds water is made use of. The upper courses of the smaller streams are regularly dammed, and embankments are also constructed wherever possible in fields to hold up water for rice. Water is generally raised from swamps and tanks by the swing-basket. In many parts of the District the spring-level is sufficiently high to allow the use of the lever and pot to raise water; but in other places a leathern bucket worked by hand labour, or less commonly by bullocks, takes the place of these. Water is generally sprinkled over the soil instead of being allowed to flood it, except in the case of garden crops.

Kankar or nodular limestone is found in many places, and is used for making lime and metalling roads. Where it occurs in block form it is used for building. Saltpetre and carbonate of soda are largely extracted from saline efflorescences called *reh*.

Trade and communications.

The most important industries of the District are sugar-refining and the weaving of cotton-cloth, which are carried on in all parts. The cloth-weaving industry has suffered from the competition of European piece-goods and also of the mills of India; but coarse varieties are still made for local use, and finer qualities from imported yarn for export. The District is the most important centre of cotton-weaving as a hand industry in the United Provinces, and about 13,000 looms are at work. Silk and satin are also largely produced. MUBĀRAKPUR, MAU, and KOPĀGANJ are the chief centres of the weaving industry. The manufacture of indigo was formerly important, but is fast declining under the competition of artificial indigo. Pottery of a rather poor style is produced at Nizāmābād.

The chief imports are grain, European piece-goods and yarn, cotton, silk, tobacco, salt, metals and hardware, and drugs; and the exports are sugar, opium, cloth, oilseeds, indigo, and saltpetre. Grain is largely imported from the country north of the Gogra. The trade routes have been considerably altered by recent railway extensions. Traffic still continues on the Gogra, where DOHRĪGHĀT is the chief emporium, and there is some trade during the rains on the Chhotī Sarjū. Shāhganj in Jaunpur attracts a good deal of the produce of the west of the District.

The Oudh and Rohilkhand loop line just touches the extreme west of the District, while the Bengal and North-Western branch from Gorakhpur to Benares traverses the eastern portion. These have now been linked up by a line from Shāhganj on the former through Azamgarh town to Mau, which crosses the centre of the District. A

branch connects Kopāganj with Dohrīghāt, and another branch from Kopāganj to Balliā has a very short length in the District. Road communications are fairly good. Out of a total length of 708 miles, 193 miles are metalled and are maintained by the Public Works department; but the cost of all but 86 miles is charged to Local funds. The main lines are the roads from Dohrīghāt to Jaunpur with a branch to Benares, and from the same place to Ghāzīpur, but the cross-road from Mau through Azamgarh town to Shāhganj is also important. Avenues of trees are maintained on 79 miles of road.

Famine.

From the commencement of British rule till almost the close of the nineteenth century, no drought which could be called famine was known in the District. Hailstorms, frost, floods, and drought had occasionally caused scarcity in various parts. The early part of the decade 1891–1900 was very unfavourable. Excessive and unseasonable rain damaged the harvests for three consecutive years, and in 1896 drought caused famine. The construction of a branch of the Bengal and North-Western Railway gave employment to 6,000 or 8,000 persons; relief works were also opened and the highest number of workers rose to 11,000. Nearly 4 lakhs of revenue was remitted, and the cost of all kinds of relief amounted to about 4·3 lakhs.

Administration.

The Collector is usually assisted by one member of the Indian Civil Service, and by five Deputy-Collectors recruited in India. An officer of the Opium department is stationed in the District, and there is a *tahsīldār* at the head-quarters of each *tahsīl*.

There are two District Munsifs and a Sub-Judge for civil work, and the District Judge is also Sessions Judge. Azamgarh is noted for the tension of religious feeling between Hindus and Musalmāns, which not infrequently causes trouble. In 1893 serious riots accompanied by bloodshed took place over the slaughter of kine. The people are also litigious, and agrarian disputes are not infrequent. Cattle-poisoning by Chamārs for the sake of hides is perhaps more common in Azamgarh than elsewhere in the United Provinces. Infanticide was formerly suspected, but no measures are now required for its prevention.

At the cession in 1801, Azamgarh was included in the large District of Gorakhpur then formed. In 1820 part of it was transferred to Jaunpur and part to Ghāzīpur. Three years later a Sub-Collectorate of Azamgarh was formed out of the Jaunpur *parganas*; and in 1832 a separate District of Azamgarh was constituted, to which for many years part of the present Balliā District was also attached. The early settlements were for short periods and were carried out in Gorakhpur District. Operations were commenced under Regulation VII of 1822, but were never completed; and the first regular settlement was made

between 1834 and 1837 by Mr. Thomason, afterwards Lieutenant-Governor of the North-Western Provinces, and Mr. (afterwards Sir Robert) Montgomery. Land was classified according as it produced only rice or all kinds of crops, and average rates were assumed for each class of soil. The rental 'assets' so calculated were checked by assumed average *pargana* rates. The proportion taken as revenue varied between 50 and 66 per cent., and the revenue demand was fixed at 12·4 lakhs. This settlement was revised between 1866 and 1875. The land was again classed according to the crops it produced, and the rice land was divided into four or five classes according to its quality, while the ordinary land was subdivided according to its position near the village site or remote from it. Rent rates were selected for each class of soil at inspection, and were applied to the areas of each class, deductions being made in the case of land held by high-caste tenants, who pay lower rates than those of low caste, and in the case of villages where rents were difficult to collect. The revenue fixed amounted to 16·6 lakhs, while the assumed rental 'assets' were 34·8 lakhs. The revenue demand in 1903–4 was 17·8 lakhs, the incidence being Rs. 1·5 per acre, varying in different *parganas* from R. 1 to Rs. 1·6. This figure includes the revenue of 176 villages which are permanently settled, as they formerly belonged to the Benares province. The District is at present (1906) being resettled.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue	16,59	15,53	19,17	17,78
Total revenue	18,92	21,65	25,57	22,97

AZAMGARH is the only municipality, but ten towns are administered under Act XX of 1856. Beyond the limits of these, local affairs are managed by the District board, which in 1903–4 had an income of 1·2 lakhs, chiefly derived from local rates. The expenditure was also 1·2 lakhs, and included Rs. 43,000 spent on roads and buildings.

The District Superintendent of police has a force of 4 inspectors, 110 subordinate officers, and 408 constables, besides 117 municipal and town police, and 2,260 rural and road police. There are 23 police stations. In 1903 the District jail contained a daily average of 239 inmates.

Azamgarh is above the Provincial average as regards the literacy of its inhabitants, of whom 3·3 per cent. (6·8 males and 0·2 females) could read and write in 1901. The number of public schools has risen from 184 with 7,591 pupils in 1880–1 to 224 with 11,183 pupils in 1900–1. In 1903–4 there were 265 such institutions with 14,216 pupils, of whom

162 were girls, besides 114 private schools with 1,285 pupils, including 34 girls. One of the schools is managed by Government, and 133 by the District and municipal boards. Out of a total expenditure on education of Rs. 41,000, Rs. 35,000 was charged to Local funds, and the receipts from fees were Rs. 4,000.

There are 8 hospitals and dispensaries, with accommodation for 66 in-patients. In 1903 the number of cases treated was 71,000, including 745 in-patients, and 2,559 operations were performed. The expenditure amounted to Rs. 10,000, chiefly met from Local funds.

About 42,000 persons were successfully vaccinated in 1903-4, representing a proportion of 27 per 1,000 of population. Vaccination is compulsory only in the municipality of Azamgarh.

[J. R. Reid, *Settlement Report* (1877); *District Gazetteer* (1883, under revision).]

Azamgarh Tahsīl.—Head-quarters *tahsīl* of Azamgarh District, United Provinces, conterminous with the *pargana* of Nizāmābād, lying between 25° 53′ and 26° 12′ N. and 82° 52′ and 83° 16′ E., with an area of 314 square miles. Population decreased from 289,488 in 1891 to 264,114 in 1901, the rate of decrease being the lowest in the District. There are 809 villages and two towns, including AZAMGARH, the District and *tahsīl* head-quarters (population, 18,835). The demand for land revenue in 1903-4 was Rs. 3,18,000, and for cesses Rs. 51,000. The density of population, 841 persons per square mile, is the highest in the District. Across the centre of the *tahsīl* flows the Tons, while the Mangai traverses the southern portion. In the north a considerable area produces a great variety of crops, but in the south rice is the most important staple. The area under cultivation in 1897-8 was 185 square miles, of which 119 were irrigated. Wells supply three-fourths of the irrigated area, and tanks, swamps, and small streams the remainder.

Azamgarh Town.—Head-quarters of Azamgarh District and *tahsīl*, United Provinces, situated in 26° 5′ N. and 83° 12′ E., on the Tons and on a branch of the Bengal and North-Western Railway. Population (1901), 18,835. The town was founded about 1665 by Azam Khān, son of one of the Gautam Rājās referred to in the history of AZAMGARH DISTRICT. The dilapidated remains of the fort built by Azam Khān and a temple erected in the latter part of the eighteenth century are the only buildings of any age. Azamgarh is almost surrounded by a loop of the Tons, which is subject to heavy floods, occasionally causing great damage. Thus in 1894 it was estimated that the loss at Azamgarh was about Rs. 50,000, and the flood of 1871 was still more serious. An embankment was made between 1896 and 1898, which affords protection from floods, at a cost of Rs. 13,000. The chief public buildings are the male and female dispensaries, the town hall, the church,

the Mission school, and the National high school. Azamgarh has been a municipality since 1884. During the ten years ending 1901 the income averaged Rs. 17,800 and the expenditure Rs. 17,000. In 1903-4 the income was Rs. 19,000, chiefly derived from octroi (Rs. 11,000); and the expenditure was Rs. 22,000. The chief manufactures are sugar-refining and the weaving of cotton cloth. There are two high schools and seven primary schools, with a total attendance of 675.

Azīmganj.—Town in the Lālbāgh subdivision of Murshidābād District, Bengal, situated in 24° 15′ N. and 88° 16′ E., on the right bank of the Bhāgīrathi. The population of Azīmganj, together with Jiāganj on the opposite bank, which is included within the same municipal limits, was 13,385 in 1901. Azīmganj is the terminus of the branch railway from Nalhāti junction, and is an important trade centre. A small steamer runs in connexion with the railway between Azīmganj and Berhampore, but sometimes during the dry season it cannot get beyond Lālbāgh. Azīmganj is connected by a ferry with Jiāganj on the opposite bank; and a service of steamers, which plies during the rains between Jiāganj and Dhuliān, calls here for goods and passengers. The town contains many well-built houses and some handsome temples belonging to Jain merchants. Azīmganj was constituted a municipality in 1896. The income during the eight years ending 1903-4 averaged Rs. 16,000, and the expenditure Rs. 15,000. In 1903-4 the income was Rs. 16,000, of which Rs. 9,000 was derived from a tax on persons (or property tax); and the expenditure was Rs. 15,500.

Azmeriganj.—Trade centre in Sylhet District, Eastern Bengal and Assam. *See* AJMIRIGANJ.

Bābā Budan Mountains.—The highest range in Mysore State, lying between 13° 23′ and 13° 35′ N. and 75° 37′ and 75° 52′ E., in the middle of Kadūr District. The form of the range is that of a crescent or horseshoe, with the opening north-west, hence its appropriate Hindu name Chandra Drona or 'crater of the moon.' The northern arm, beginning with the Hebbe hill (4,385 feet), stretches eastwards without interruption for about 15 miles, and then, bending southwards, presents to the east an unbroken wall of more than 20 miles. The southern arm is formed by the Basavan-gudda and Woddin-gudda ranges. The character of the chain is that of a stupendous ridge, whose elevation is 6,000 feet above sea-level, and in some parts only a few yards wide at the summit, rising at intervals into loftier peaks. The higher portions consist of steep grassy slopes, well wooded in the ravines, through which flow perennial springs. The sides are densely clothed with forests, among which are numerous coffee plantations, while the Jāgar valley is one stretch of forest as far as the eye can see. The highest point is Mulainagiri (6,317 feet), towards the south of the range. Near

to this, north-eastwards, is Bābā-Budan-giri or Vāyu-parvata (6,214 feet), on which are the sources of the Veda and Avati rivers. The hollow which succeeds marks the shrine of the eponymous saint Bābā Budan. The conspicuous conical peak on the outer verge of the eastern face is Deviramman-gudda, where a beacon is lighted at the Dīpāvali festival. Near the north-east angle is Kalhatti-giri (6,155 feet), north of which a hot-season retreat has been established. These vast wilds and solitudes, with scarcely a human habitation, were formerly well stocked with game, from the elephant and bison downwards. The advance of the coffee-planter has now forced back wild animals to the remoter and more secluded spots. The Bābā-Budan-giri was the cradle of coffee cultivation in Southern India; and the slopes of the entire range, as well as the tract south of the forest-bound Jāgar valley, are now occupied by coffee gardens, both European and native. The first European garden was opened about 1840, to the south of Bābā-Budan-giri. Two roads run along the eastern face of the mountains, one over the summit and the other at a lower level. About midway in the latter is Santaveri, chiefly a colony of Lambānis, whence there is a road to Kalhatti at the top. On the north-east of the mountains are the Abbe falls of 600 feet. The name Bābā Budan is that of a Musalmān saint who took up his abode on the hill so called, and reared coffee from seeds he obtained at Mocha when on pilgrimage, thus introducing that important staple into India. A cave said to contain his tomb is in charge of a Musalmān *fakīr* at Attigundi, the only village on the hills, and is visited by pilgrims of both creeds. Hindus claim that the tomb is the throne of Dattātreya, whose appearance at the mouth of this cave will herald the final *avatār* of Vishnu and usher in the millennium.

Baberū.—*Tahsīl* of Bāndā District, United Provinces, conterminous with the *pargana* of Augāsī, lying along the Jumna, between 25° 23′ and 25° 41′ N. and 80° 30′ and 80° 57′ E., with an area of 363 square miles. Population fell from 96,284 in 1891 to 77,395 in 1901, the rate of decrease being the highest in the District. There are 121 villages, but no town. The demand for land revenue in 1903–4 was Rs. 1,26,000, and for cesses Rs. 20,000. The density of population, 213 persons per square mile, is almost exactly the District average. Near the south and east rice is grown in considerable quantities, this tract being known as Jurār. The Jumna, as usual, is fringed by a network of deep ravines. In 1903–4 only one square mile was irrigated, out of 189 square miles under cultivation. The Ken Canal, when completed, will supply part of this *tahsīl*.

Bābra.—Petty State in KĀTHIĀWĀR, Bombay.

Bachhraon.—Town in the Hasanpur *tahsīl* of Morādābād District, United Provinces, situated in 28° 56′ N. and 78° 15′ E., 41 miles west

of Morādābād city. Population (1901), 7,452. According to tradition, it was founded in the time of Prithwī Rāj. The town contains several mosques and a temple. It is administered under Act XX of 1856, with an income of about Rs. 1,300. A primary school has 78 pupils.

Backergunge (*Bākarganj*, 'Mart of Aghā Bākar').—Southernmost District of the Dacca Division, Eastern Bengal and Assam, lying between 21° 49′ and 23° 5′ N. and 89° 52′ and 91° 2′ E., with an area of 4,542 square miles. It is bounded on the north by Farīdpur; on the east by the Meghnā and Shāhbāzpur rivers, which separate it from Noākhāli; on the south by the Bay of Bengal; and on the west by the Baleswar river and its estuary the Haringhāta, which divide it from Khulnā.

Physical aspects.

Backergunge is a typical part of the alluvial delta formed by the three great river systems of Eastern Bengal. The District consists partly of mainland and partly of islands in the estuary of the Meghnā, the largest being DAKHIN SHĀHBĀZPUR, and forms an unbroken plain intersected by a network of sluggish and muddy tidal rivers and channels, with a slight decline from the east towards the west and north-west. Along the coast-line of the Bay lie the SUNDARBANS, a group of half-reclaimed islands separated by tidal creeks, which cover an area in this District of 897 square miles. The MEGHNĀ estuary, here some 8 miles in breadth, sweeps past the east of the District, and is divided by the Dakhin Shāhbāzpur island into an eastern branch called the Shāhbāzpur, and a western known as the Tetuliā river. The Ariāl Khān is a branch of the Ganges; it crosses the north-east corner of the District, and joins the Meghnā through the Māshkāta and Kalingā channels. The river system consists of offshoots from the Meghnā estuary and the tributaries and distributaries of the Ariāl Khān and Baleswar (as the MADHUMATĪ is called in its lower reaches), which ramify into channels intersecting the District in every direction. A perplexing multiplicity of names extends even to the smaller watercourses, which are often known by different names to villagers living on opposite banks, while the Meghnā estuary itself is known in different parts of its course as the Sātbāria, the Ilsa, the Tetuliā, and the Shāhbāzpur. Most of the rivers and water-channels are navigable throughout the year and are subject to tidal action, which however is powerless during the freshes of the rainy season to arrest the seaward flow of the immense volume of rain-water pouring down the big rivers. Alluvion and diluvion are constantly taking place, especially towards the east, where the District is washed by the Meghnā. On the north and east of the island of Dakhin Shāhbāzpur, the land is being rapidly cut away, while on its western shore a corresponding formation is taking place and large alluvial accretions are being thrown up in the estuary, the names of which indicate their recent origin. There is a very

strong bore at spring tides in the estuary of the Meghnā, and at that season boatmen seldom venture on the river.

The District lies low and, except in the east, most of the country is inundated during the rains. There are extensive depressions in the north and north-west, where the water remains all the year round, the principal being the Sātlā, Dalbairā, Jhanjhaniā, Rāmpur Chechri, Adampur, and Kālārāja *bīls* or swamps.

The District is covered by recent alluvium, consisting of sandy clay and sand along the course of the rivers and fine silt consolidating into clay in other parts of the river plain, while in the marshes beds of impure peat commonly occur.

During the rainy season, only the river banks and the artificial mounds on which habitations are situated escape inundation. Where not occupied by gardens, these patches of high ground are densely covered with a scrubby jungle of semi-spontaneous species, from which rise bamboos, areca and coco-nut palms, with a few taller trees, among which the commonest is *Odina Wodier* and the most conspicuous the red cotton-tree (*Bombax malabaricum*). The surface of the marshes either shows huge stretches of inundated rice or is covered by matted floating islets of sedges and grasses, and with various water-lilies, the most striking of these being the *makana* (*Euryale ferox*). Backergunge contains no Government forests, but the Sundarbans in the south produce many kinds of timber and an abundant supply of firewood. The chief trees are the *sundri* (*Heritiera littoralis*), *haritakī* (*Terminalia Chebula*), *gāb* (*Diospyros embryopteris*), *keorā* (*Sonneratia apetaea*), *kripa* (*Lumnitzera racemosa*), *garān* (*Ceriops Roxburghianus*), *gamhār* (*Gmelina arborea*), and *karanj* (*Galedupa indica*).

Tigers, leopards, deer, buffaloes and wild hog abound in the Sundarbans, and crocodiles swarm in the rivers and are very destructive. Nearly 300 persons are killed annually by wild beasts and snakes.

Backergunge is remarkable for its uniform temperature and for the high humidity prevailing from April to October; the mean temperature remains almost stationary between 83° and 85° from April to September, but falls in the cold season to 67°. The annual rainfall averages 83 inches, of which 8·1 inches fall in May, 16·3 in June, 18·7 in July, 15·3 in August, 10·6 in September, and 5·9 in October.

Backergunge is peculiarly liable to cyclones accompanied by storm waves. The most disastrous in recent times were those of 1822 and 1876. In the former, 40,000 human beings and 100,000 cattle perished, and the Collectorate records were swept away. In the latter, Dakhin Shāhbāzpur and some *thānas* of the Patuākhāli subdivision were submerged to a depth of from 10 to 45 feet, and 124,000 persons were drowned or died in the cholera epidemic which ensued; there was also an enormous mortality among the cattle.

History.

In prehistoric times Backergunge appears to have formed part of the old kingdom of Banga or Samatata. Its people, who are described in the Raghubansa as living in boats, were clearly the ancestors of the Namasūdras or Chandāls, who are still numerous in the north-west of the District. Authentic history dates only from the fifteenth or sixteenth century. *Pargana* Chandradwīp, or Bākla, was long the seat of a line of Hindu *zamīndārs*, belonging to the group of chiefs known as the Bāra Bhuiyā, who were poetically known as 'the twelve suns of Bengal.' These *zamīndārs* first ruled in Kachuā and subsequently in Mādhabpāsa, where the Durgā Sāgar, a large tank still in existence, is associated with them. One of the scions of their family married a daughter of the famous Rājā Pratāpāditya of Jessore. When or how Musalmāns first came into the District in any numbers is uncertain, but relics of their early settlements exist in the ruins of mosques at Bībī Chini and Kasbā. During the seventeenth and eighteenth centuries the Arakanese (locally known as Maghs) made regular raids in fleets of armed vessels up the rivers of Eastern Bengal; and as late as 1770, when Major Rennell surveyed the District, he described the southern half of it as a wilderness devastated by the Maghs. In order to defend the country against these incursions, the Mughal governor of Bengal in 1608 transferred his capital to Dacca, and his successor Shāh Shujā, the brother of Aurangzeb, built a fort (since completely washed away by the Nalchitī river) at Shujābād, 5 miles south-west of Barisāl. Early in the eighteenth century, *pargana* Buzurgumedpur came into the hands of Aghā Bākar, a servant of the Nawāb of Murshidābād, who has given his name to the village and District of Backergunge. After Aghā Bākar's death, Rājā Rāj Ballabh of Rājnagar, one of the most famous men of his time, got possession of the property; and it was he who first invited Portuguese Christians from Bāndel and Goa in order to coerce his refractory tenants, and settled them in the Sibpur *tāluk*, where their descendants, known as Firinghīs, still reside.

British rule in the District dates from the Company's accession to the Dīwāni in 1765. Until 1817 the District formed part of the Dacca Collectorate, but was administered by a Judge and Magistrate of its own, who was stationed at the town of Backergunge near the junction of the Krishnakāti and Khairābād rivers. In 1801 the administrative head-quarters were transferred to Barisāl. Numerous changes of jurisdiction have since occurred, the most important being the transfer of the island of Dakhin Shāhbāzpur from Noākhāli to Backergunge in 1859, and that of the greater part of the Mādārīpur subdivision from this District to Farīdpur in 1874.

The population increased from 1,887,586 in 1872 to 1,900,889 in 1881, to 2,153,965 in 1891, and to 2,291,752 in 1901. Progress

was checked between 1872 and 1881 by the disastrous cyclone of 1876. During the decade ending 1901 the greatest increase of population took place in the swampy *thānas* in the north (Gaurnadī 14·8 per cent. and Swarupkāti 13·7), where reclamation is steadily going on as fresh deposits of silt gradually replace water by mud. Two of the three Sundarban *thānas*, Amtalī and Galāchipā, in which cultivation is rapidly extending, also showed large increases. The climate is not unhealthy, except after the close of the rains, when fever is prevalent. The chief statistics of the Census of 1901 are shown below:—

Population.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Barisāl	1,110	3	2,048	945,367	852	+ 7·5	92,778
Pirojpur	692	1	1,066	553,494	800	+ 6·5	55,902
Patuākhāli	1,231	1	1,051	522,658	425	+ 5·2	21,794
Dakhin Shāhbāzpur	612	...	447	270,233	442	+ 4·6	12,319
District total	4,542*	5	4,612	2,291,752	505	+ 6·4	182,793

* Includes 897 square miles comprised in the Sundarbans, which are not included in the subdivisional figures.

The District contains a large but sparsely inhabited tract in the Sundarbans. If this be excluded, the density of population rises from 505 to 629 per square mile; it is greatest in the Pirojpur and Jhālakāti *thānas*, where there are respectively 1,128 and 1,193 inhabitants to the square mile. The principal towns are BARISĀL, the head-quarters, PIROJPUR, JHĀLAKĀTI, and PATUĀKHĀLI. A great influx of labourers takes place at the winter rice harvest from Farīdpur, Dacca, and Noākhāli. The language of the District is the dialect of Bengali known as Musalmānī. Musalmāns number 1,565,024, or more than 68 per cent. of the total, and Hindus 713,800; among the remainder there are 7,220 Buddhists and 5,591 Christians.

Of the Musalmāns more than 1½ millions call themselves Shaikhs, and are doubtless in the main derived from the aboriginal race represented at the present day by the Hindu Namasūdras, who number 318,000 and live an almost amphibious life in the swamps in the north-west of the District. After the Namasūdras, Kāyasths (78,000), Brāhmans (52,000), Nāpits and Sūdras (each with 36,000), and Kaibarttas (26,000) are the most numerous Hindu castes. The Buddhists are Maghs who have resided in this part of the Sundarbans for more than a century; they adhere to their own mode of living, intermarry strictly among themselves, and build their dwellings on piles

on the model of Burmese houses. Of the total population, no less than 81 per cent. are dependent on agriculture; industries support 9·6 per cent., commerce 0·5 per cent., and the professions 2·3 per cent.

Missions of various denominations are active; the number of native Christians has nearly doubled since 1881 and now exceeds 5,000. They are mainly recruited from the ranks of the despised Namasūdras. The Portuguese colony at Sibpur has already been mentioned; a Roman Catholic mission was established at this place 200 years ago under the patronage of the King of Portugal, and there is another more recent mission subordinate to the Bishop of Dacca. The Baptist Mission has some 3,000 converts, and connected with it is a Zanāna Mission, which maintains a large boarding-school for girls at Barisāl. The Bengal Evangelistic Mission, whose head-quarters are at Farīdpur, and the Oxford Mission have branches in this District; and a sisterhood is engaged in medical, educational, and proselytizing work among native women in Barisāl.

Agriculture.

The higher ground in the east produces sugar-cane, pulses, the *pān* creeper (*Piper Betle*), and a little jute; the rest of the District is fertilized by rich deposits of silt and forms with Noākhāli the most important rice-producing tract in Eastern Bengal.

The chief agricultural statistics for 1903–4 are shown below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Barisāl	1,110	701	39
Pirojpur	692	547	70
Patuākhāli	1,231	547	102
Dakhin Shāhbāzpur	612	418	23
Total	4,542*	2,213	234

* Includes 897 square miles in the Sundarbans.

Rice is grown over an area of 2,205 square miles, or 83 per cent. of the total cultivated area. The winter rice, which covers 78 per cent. of the net cropped area, is sown in April or May, transplanted from the beginning of June to the middle of August, and reaped in November and December. The early rice crop is sown in spring and the early part of the hot season, and reaped in August; in some parts it is transplanted, but in the north it is sown broadcast. The spring crop, although not equal in importance to the others, is cultivated to a considerable extent on the alluvial accretions along the river banks and in the swamps. It is generally sown broadcast in December and reaped in April or May; it is sometimes transplanted. Pulses are sown in the cold season and harvested in the spring. *Til* (*Sesamum indicum*) and

linseed are also cultivated, the latter chiefly in the Dakhin Shāhbāzpur subdivision. There is very little jute, but betel-nut and coco-nut palms are grown extensively all over the District; and it is estimated that the number of betel-nut trees is altogether about 27 millions, and that the annual out-turn is 6,000 million nuts.

The area under cultivation is spreading rapidly as the swamps silt up in the north and the jungle is reclaimed in the south. The area not available for cultivation is returned at 1,121 square miles; it lies mainly in the Sundarbans, and much of it is covered with the water of the great estuaries. In Wards' and Government estates European vegetables and improved varieties of native crops have been introduced to a small extent. Owing to the fertility of the soil and the general prosperity of the cultivators, there is little need for Government loans, but Rs. 17,000 was advanced under the Agriculturists' Loans Act after the cyclone of 1893.

The District cattle are poor. Attempts have been made by Government and public bodies to improve them by importing bulls from Bihār, but without success.

Trade and communications.

Backergunge is not a manufacturing District; but oil, coarse cloth, mosquito nets, gunny-bags, sacrificial knives and other iron instruments, mats of various kinds, earthenware, agricultural implements, and molasses are manufactured for local consumption. The weavers of Wazīrpur and Bānaripāra make *dhotīs* of the Dacca pattern; the mosquito nets manufactured at Mādhabpāsa command a large sale among the middle classes, and the Maghs weave coloured cloth for their own use. Machine-made cloth is gradually driving the local weavers from their looms, and the rapidly growing taste for European pottery and enamelled ironware is depriving the local potters of their best customers. Wazīrpur and its neighbourhood has a local reputation for *daos* and other iron implements, and boats are built all over the District. Brick-making is carried on to a considerable extent in the neighbourhood of Barisāl, and a large oil-mill at Jhālakāti has an annual out-turn valued at Rs. 25,000.

Rice is exported to the Twenty-four Parganas, Dacca, and Mymensingh, and 2,000,000 tons of rice find their way annually to the Calcutta market; other articles exported are betel-nuts and coco-nuts to Calcutta, Dacca, Noākhāli, and Chittagong, and timber and mats to Calcutta. The betel-nut crop is especially large and profitable; and it is estimated that the trees in the District bring in annually nearly 44 lakhs of rupees to the growers. Most of the crop is sent to Calcutta, but some portion of it is also prepared for the Burmese market. The principal imports are salt, kerosene oil, coal, European piece-goods, cotton twist, molasses, sugar, corrugated iron, oil, tobacco, and flour. The chief trade centres are Jhālakāti and Nalchitī on the main steamer route to Calcutta,

DAULATKHĀN, and Sāhibganj; rice is also exported from Bagā, Bauphal, Niāmati, Bhāndāria, Kaukhāli, Kālaia, Chaulākāti, Charāmaddī, and Bhuriā. Large annual fairs are held at Kālīsuri, Kalaskāti, and Lākutia. The traders belong chiefly to the Gandhabanik, Sāhā, Teli, and Pātikar castes. Goods are carried by both country boats and steamers, the main trade route being via the Sundarbans to Calcutta.

There is no railway in the District, and the roads are little used for goods traffic except in the Dakhin Shāhbāzpur subdivision. Wherever constructed, they are largely used by foot-passengers, especially on market days. Excluding 487 miles of village tracks, the District contains only 307 miles of road, of which 17 miles are metalled. The most important road runs from the northern boundary via Barisāl and Backergunge to Patuākhāli. Barisāl is also connected on the west with Bānaripāra and Nabagrām, and on the south-west with Nalchitī and Jhālakāti, while another main road runs from Pirojpur to Sāpleja, via Tushkhāli, along the west of the District. A good road traverses the island of Dakhin Shāhbāzpur.

The drains along the side of many of the roads are used as waterways; and throughout the greater part of the District there are few villages which cannot be reached by boat, especially during the rains. In Dakhin Shāhbāzpur, however, few villages are accessible by boats, except in the rainy season. Regular lines of steamer ply along the larger rivers, the most important being the daily Sundarbans dispatch service from Cāchār to Calcutta, via Nārāyanganj, Chāndpur, Barisāl, Nalchitī, and Jhālakāti, and another which carries the mails between Barisāl and Khulnā. Daily services connect Barisāl with Nārāyanganj, Mādārīpur, and Patuākhāli. A steamer runs to Noākhāli four times a week. There are numerous ferries across the principal rivers and to the islands.

Administration.

For general administrative purposes the District is distributed into four subdivisions, with head-quarters at BARISĀL, PIROJPUR, PATUĀKHĀLI, and DAKHIN SHĀHBĀZPUR. At Barisāl is stationed the District Magistrate-Collector, who is also *ex-officio* collector of tolls and supervisor of the additional navigable channels under (Bengal) Act V of 1864. He is assisted by a staff of one Joint Magistrate or Assistant Collector and five Deputy-Magistrate-Collectors. Each of the other subdivisions is under a Deputy-Magistrate-Collector, and a Sub-deputy-Collector is in charge of the subtreasury at Pirojpur. There are also three *kānungos*, and a special Deputy-Collector in charge of the Government estates.

The civil courts, besides that of the District and Sessions Judge, are those of an additional District and Sessions Judge, of two Sub-Judges, and of sixteen regular Munsifs, of whom six are stationed at Barisāl, two at Bholā, three at Pirojpur, four at Patuākhāli, and one wherever the pressure of work is greatest. Criminal courts include those of the

District and Sessions Judge, the District Magistrate, and the above-mentioned Deputy-Magistrates. The practice of sub-infeudation has brought into existence a large body of middlemen between the revenue-payer and the actual cultivators, who are continually fomenting land disputes, and the District is notorious for agrarian riots. These were so frequently attended by gun-shot murders that the District was disarmed in 1896, a measure which was attended with remarkable success. The order was relaxed in 1904, and gun licences are now granted to persons of position and good character. Many crimes of violence also arise out of marriage disputes, which are rife among the lower classes Muhammadans.

In the first settlement of Bengal, made in 1582 by Rājā Todar Mal, Backergunge was included in *sarkār* Bākla; but at the subsequent settlements, made by the Muhammadan rulers, it was comprised in the province of Dacca. It was constituted a separate District in 1797 by Regulation VII of that year, but it was not till 1817 that an independent Collector was first appointed. In 1903-4 the current land revenue demand was 16·94 lakhs, payable by 3,634 estates, of which 3,019 with a demand of 10·05 lakhs were permanently settled, 278 paying 2·65 lakhs were temporarily settled, and the others were managed direct by Government. At the time of the permanent settlement there were extensive areas of waste land which remained unsettled. These have since been largely brought under cultivation and now form valuable Government estates. Owing to this circumstance, the incidence of revenue is Rs. 1-2-6 per cultivated area, as compared with only R. 0-8-18 in Farīdpur and R. 0-6-11 in Dacca.

Sub-infeudation is carried to extreme lengths, and there are said to be as many tenures as there are *ryoti* holdings. The system was originated by *zamīndārs* and *talukdārs*, who, finding themselves unable to clear the large tracts of unreclaimed land included in their properties, divided them into lots and placed each lot in the *haolā* or charge of an individual; the *haolādār* repeated the process to sub-lessees, who in their turn sublet portions of their tenures, until these became of manageable size. This system of reclamation tenures is universal in the half-cleared tracts of Eastern Bengal, but in Backergunge it has been overlaid by a bewildering maze of more or less fictitious tenures, which owe their origin to land-jobbing. The grant of a tenure of any description commands a heavy *salāmi* or premium; and a landlord's favourite method of raising money is to create an intermediate tenure between himself and the ryot or tenure-holder immediately subordinate to him, at a rent slightly lower than he has been receiving, the premium paid to him being equivalent to the capitalized value of the reduction in rent. The new lessee makes a profit by squeezing an extra cess out of the man below him; and the result is that an undue share of the produce of the

soil goes to feed an army of middlemen who have no rightful place in the rural economy. This process is being constantly repeated by all grades of tenure-holders; and there seems to be no limit to its development, save the capacity of the actual cultivator to bear the increased burden falling upon him. In spite of this, however, the system tends to diffuse wealth widely among the people; many of the tenure-holders are men of the cultivating class and cultivate some portion of their tenures themselves; they generally hold these tenures at fixed rates, the rents are moderate, and, as a class, they are very prosperous. The ryot again is only rack-rented where the tenure immediately above him is held by a strong and unscrupulous man, and such rack-renting is confined to certain localities in which the lowest grade of tenure is in the hands of a bad class of landlord. When the ryot finds his rent enhanced more than he can bear, or if he is influenced by attractive promises held out by an outsider, he will deny his relationship as tenant to his real landlord, and will place himself under the protection, or *zimba*, of the outsider, acknowledging the latter as his landlord. This, with the infinitesimal division of shares, where no actual partition of the land can take place, has led to the agrarian riots and murders for which this District is notorious. To obviate these disputes, a general survey and record-of-rights is now being carried out throughout the District. The latest survey papers show that the rent per acre paid by the actual cultivator to his immediate landlord for arable land varies from Rs. 2 to Rs. 10 per acre, the average being Rs. 5. High land suitable for homesteads commands a still higher rate.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	14,63	15,64	16,41	16,95
Total revenue . . .	23,09	26,29	30,81	31,79

Outside the five municipalities of BARISĀL, NALCHITĪ, JHĀLAKĀTI, PATUĀKHĀLI, and PIROJPUR, local affairs are managed by the District board, with subordinate local boards in each subdivision. In 1903-4 its income was Rs. 3,32,000, of which Rs. 2,26,000 was derived from rates; and the expenditure was Rs. 3,21,000, including Rs. 1,96,000 spent on public works and Rs. 61,000 on education.

The District contains 16 police stations or *thānas*, and 11 outposts. The force subordinate to the District Superintendent in 1903 consisted of one Assistant District Superintendent, 8 inspectors, 66 sub-inspectors, 38 head constables, and 541 constables; 76 town *chaukīdārs* are employed for watch and ward duty in the five municipal towns, and there is also a rural police force consisting of 5,293 village watchmen

and 508 head watchmen. The District jail at BARISĀL has accommodation for 580 prisoners, and the subsidiary jails at the other subdivisions for 99.

Education is widely diffused, and in 1901, 7·9 per cent. of the population (14·7 males and 0·9 females) could read and write. Musalmāns are more backward than Hindus, only 10 per cent. of their males being literate, compared with 24 per cent. in the case of Hindus. The total number of pupils under instruction rose from 75,859 in 1892–3 to 86,456 in 1900–1, while 81,554 boys and 7,189 girls were at school in 1903–4, being respectively 46·2 and 4·2 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 3,074, including an Arts college, 98 secondary schools, and 2,497 primary schools. The expenditure on education was 3·51 lakhs, of which Rs. 27,000 was met from Provincial funds, Rs. 61,000 from District funds, Rs. 1,500 from municipal funds, and 1·88 lakhs from fees. The chief educational institutions are in BARISĀL TOWN.

In 1903 the District contained 41 dispensaries, of which 5 had accommodation for 68 in-patients. The cases of 331,000 out-patients and 1,060 in-patients were treated during the year, and 8,913 operations were performed. The expenditure was Rs. 34,000, of which Rs. 2,000 was met from Government contributions, Rs. 21,000 from Local and Rs. 4,000 from municipal funds, and Rs. 6,000 from subscriptions.

Though vaccination is compulsory only within the five municipalities, it has made great progress in recent years, the number of successful vaccinations in 1903–4 being 122,000, or 54·2 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v, and Geographical Notes appended to vol. i (1875); H. Beveridge, *Backergunge* (1876); P. M. Basu, *Settlement Reports of the Dakhin Shāhbāzpur and Tushkhāli Government Estates* (Calcutta, 1896 and 1898).]

Badagara (= 'North bank').—Town in the Kurumbranād *tāluk* of Malabar District, Madras, situated in 11° 36′ N. and 75° 36′ E., on the sea-coast at the northern extremity of the Elattūr-Badagara backwater, and on the trunk road and the railway from Calicut to Cannanore. Population (1901), 11,319. The value of the imports by sea in 1903–4 was 9 lakhs; of the exports, 34 lakhs. The former consist chiefly of rice and salt; the latter of coco-nuts, copra, pepper, and timber. Badagara is a busy town, and the head-quarters of the *tāluk* and of a sub-magistrate and a District Munsif.

Badakhshān.—A separate province of Afghānistān, which may be defined as the country drained by the Kokcha and its tributaries. It is bounded by the Oxus on the north, and to the east as far as

Ishkashim; thence by Wākhān and a great spur of the Hindu Kush; on the south by the Hindu Kush, which separates it from Chitrāl and Kāfiristān; and on the west by the district of Kataghān. Except near the Oxus, the country is distinctly alpine in character, and contains some lofty peaks, notably Tirgarān, which is probably over 20,000 feet. The rivers are for the most part rapid, and difficult to cross. They abound in fish.

The inhabitants of the country are Tājiks and Turks, of whom the former are the more numerous, and probably represent the original Irānian inhabitants of the Oxus valley. They have a distinctly Aryan type; their features are good, their complexions fair but weather-beaten, and their physique is respectable. The Turks, who are more industrious and enterprising, are distinguished by the square and high cheek-bone which marks the infusion of Mongol blood. The total population of Badakhshān proper may be estimated at about 100,000. The inhabitants of the country were originally Shiah; but on the irruption of the Uzbeg Sunnis, all who could not escape to the hills were forcibly converted to that form of the Moslem faith. The people are, as a rule, hospitable, peaceful, and well conducted. Heinous crimes are seldom heard of in Badakhshān or Wākhān; adultery is rare; and only disputes regarding land and water have to be decided by the village communities, or by higher authority. The Badakhshis are on the whole well fed and warmly clad, while their habits and domestic arrangements are simple. The only places which have any pretence to be designated as towns are FAIZĀBĀD, RUSTĀK, Khānābād, and Chayāb.

Of the early history of Badakhshān there are no reliable records. Tradition states that the early rulers were descendants of Alexander the Great, and it is possible that one of his adherents secured the country for himself, and transmitted it to his descendants. One Muhammad Shāh was the last of these so-called Badakhshi 'Sultāns of Alexander.' None of the three great Tartar conquerors—Chingiz, Tīmūr Lang, and Shaybāni Khān—appears to have penetrated so high up the valley of the Oxus. Native tradition states that the emperor Bābar bestowed Badakhshān upon a son, Mirza Hindal, who after a short reign went to India and was succeeded by one of the emperor's generals, Mirza Sulaimān. On his death the country devolved upon his son; but later it seems to have been ruled over by its own Mīrs. About 1840 it was subjugated by Mīr Murād Beg of Kataghān. In 1859, on the conquest of Kataghān by the Afghāns, Badakhshān became tributary to Kābul. In 1881 the Amīr Abdur Rahmān abolished the last remnant of local autonomy, and set up an Afghān governor. Wākhān and Shighnān, the latter being now Russian territory, were also ruled for centuries by their own Mīrs; but the ruler of Badakhshān was invariably recognized

as the suzerain. Since the advent of Afghān troops to Badakhshān, Wākhān has also been ruled by an Afghān Hākim.

The winter in Badakhshān is severe, the mountains being impassable from snow early in December, and the rivers generally frozen. Rain is said to be abundant and chiefly falls during the spring. In the mountainous region snow commences to fall in November. On the other hand, in the low-lying districts of Rustāk, Chayāb, and Daung, bordering the Oxus, the heat in summer is very great; and even Faizābād, the capital of Badakhshān proper, is unpleasantly warm.

The mineral wealth of Badakhshān is probably considerable. Salt and sulphur are found in the valley of the Kokcha, and iron is known to exist near Faizābād. Near the sources of the Kokcha are famous lapis lazuli mines, while within 20 miles of Ishkashim, and on the right bank of the Oxus, are ruby mines, for which Badakhshān has long been famous. There are no important manufactures. Badakhshi horse-trappings and furniture, however, find a ready sale in the surrounding countries.

Bādāmgarh.—Peak in Bonai State, Bengal, situated in 21° 49′ N. and 85° 16′ E., and rising to a height of 3,525 feet above sea-level.

Bādāmi Tāluka.—South-westernmost *tāluka* of Bijāpur District, Bombay, lying between 15° 49′ and 16° 9′ N. and 75° 19′ and 76° 32′ E., with an area of 615 square miles. It contains one town, GULEDGARH (population, 16,786), and 167 villages, including KERŪR (5,353). The population in 1901 was 110,287, compared with 100,511 in 1891, the increase being mainly confined to Guledgarh, which carries on a large manufacture of bodices held in great repute throughout the Deccan and Southern Marāthā Country. The density, 179 persons to the square mile, is much above the District average. The demand for land revenue in 1903–4 was 1·31 lakhs, and for cesses Rs. 11,000. The head-quarters are at BĀDĀMI. The extreme north-west of the *tāluka* lies high, and the surface, which is sandstone overlaid with trap, is undulating without large hills. In the centre, sandstone ranges are separated by plains of red sand. The *tāluka* is poorly supplied with water. The climate is considered the worst in the District. The annual rainfall averages about 26 inches.

Bādāmi Village.—Village in the *tāluka* of the same name, in Bijāpur District, Bombay, situated in 15° 55′ N. and 75° 41′ E., on the Southern Mahratta Railway. Population (1901), 4,482. It is interesting for a Jain excavation and cave-temple ascribed to A.D. 650, together with three caves of Brāhmanical construction, one of which has an inscription bearing the date A.D. 579. The Jain cave is only 31 feet across by about 19 feet deep. These caves mark the period when Hinduism was reasserting itself, previous to its final triumph over Buddhism in the next century or two. The Narsingha incarnation

of Vishnu, seated on the five-headed serpent Anant, and a variety of sculptures, still survive. In one cave-temple the front pillars have three brackets of a wooden-like design, ornamented by male or female figures and dwarfs, of considerable beauty of execution. Some of the pillars are more architectural in their forms, and in the best style of Hindu art. There are two forts, one to the north called Bāvanbande (or 'fifty-two rocks'), and one to the south called Ran-mandal (or 'battle-field'). Both were dismantled about 1845. Its strength and neighbourhood to the sacred Aivalli, Bānshankari, Mahākut, and Pattadkal combine to make Bādāmi a likely site for an early capital. It was probably a Pallava stronghold in the sixth century, and then fell to the Chālukyas. Hiuen Tsiang visited it early in the seventh century. Bādāmi continued for several years in possession of the Vijayanagar kings during the sixteenth century; it then fell to the Marāthās. In 1818 General Munro took it after considerable resistance. In 1840 a band of 125 Arabs from the Nizām's territory, headed by a blind Brāhman, Narsingh, took possession of the village, plundered the Government treasury and market, and carried the booty into the Nizām's territory. Returning, Narsingh commenced administration, but in seven days he was caught, tried, and sentenced with his followers to transportation. Bādāmi contains a boys' school with 163 pupils and a girls' school with 53.

Badarpur (*Badrpur*).—Village in the Karīmganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 51′ N. and 92° 33′ E., on the south bank of the Barāk close to the boundary of Cāchār. When the Burmese invaded Cāchār in 1824, the British troops met and defeated them near this spot. The remains of an old fort are still to be seen on a rock overhanging the river. Badarpur is now an important junction on the Assam-Bengal Railway. The main line crosses the Barāk by a fine bridge 454 yards long, which is raised sufficiently high above the river to admit of the passage of steamers at all seasons of the year. A branch line runs along the south bank of the river to Silchar. There is a temple of Siddheswar in the neighbourhood, at which a bathing fair is held every year in March.

Badausā.—South-western *tahsīl* of Bāndā District, United Provinces, conterminous with the *pargana* of the same name, lying between 25° 3′ and 25° 27′ N. and 80° 31′ and 80° 52′ E., with an area of 333 square miles. Population fell from 77,922 in 1891 to 74,755 in 1901. There are 132 villages, but no town. The demand for land revenue in 1903–4 was Rs. 86,000, and for cesses Rs. 14,000. The density of population, 224 persons per square mile, is above the District average. The Bāghain flows through the *tahsīl* from south-west to north-east. In the south are scattered hills, and the south-east includes a small patch of 'reserved' forest, but most of the *tahsīl* lies in the plains. In

1903–4 only 1 square mile was irrigated, out of 165 square miles under cultivation. The Ken Canal, when completed, will supply a small area.

Badin Tāluka.—*Tāluka* in Hyderābād District, Sind, Bombay, lying between 24° 13′ and 24° 58′ N. and 68° 43′ and 69° 16′ E., with an area of 792 square miles. The population rose from 73,823 in 1891 to 84,790 in 1901. The density is 103 persons per square mile, which is a little below the District average. The number of villages is 165. Land revenue and cesses amounted in 1903–4 to 2·8 lakhs. BADIN is the head-quarters. The *tāluka*, which is triangular in shape, with its base on the Rann of Cutch, is flat, well watered, and an ideal grazing tract. The principal crops are rice and sugar-cane.

Badin Village.—Head-quarters of the *tāluka* of the same name in Hyderābād District, Sind, Bombay, situated in 24° 38′ N. and 68° 54′ E., 62 miles from Hyderābād city and 41 from Tando Muhammad Khān. Population (1901), 2,076. The Hindus are principally shopkeepers and the Muhammadans agriculturists and weavers. Badin was founded about 1750 by a Hindu named Sawālo. The old town (on the opposite bank of the Mirwah canal) was totally destroyed by Shāh Nasīrdīn, otherwise Madad Khān, the famous Pathān, in his raid into Sind. There is a large local trade in grain, *ghī*, sugar, molasses, cloths, metals, tobacco, skins, cotton and drugs, with an annual fair in June, lasting a fortnight. The village contains a dispensary.

Badnera (or Wadnera).—Town in the District and *tāluk* of Amraotī, Berār, situated in 20° 52′ N. and 77° 46′ E. Population (1901), 10,859. The town is mentioned in the *Ain-i-Akbarī* as the head-quarters of a *pargana* in the *sarkār* of Gāwīl. It is known as Badnera Bībī, as it formed, with Kāranja, part of the dowry of Daulat Shāh Begam, daughter of Daryā Imād Shāh of Berār, who was given in marriage to Husain Nizām Shāh of Ahmadnagar. The exactions of successive rulers depopulated Badnera, and it was plundered in 1822 by Rājā Rām, who partly demolished the fort and town walls. The railway station (Badnera junction) is 413 miles from Bombay, on the Nāgpur branch of the Great Indian Peninsula Railway. It is connected with Amraotī by a branch (state) railway 6 miles long. Badnera is important as the station whence all the Amraotī cotton is dispatched to Bombay. The town contains a cotton-spinning and weaving factory, where 248 looms and 16,336 spindles were at work in 1903–4, the number of hands employed being 822.

Badnor.—Principal town of an estate of the same name in the north of the State of Udaipur, Rājputāna, situated in 25° 50′ N. and 74° 17′ E., close to the border of the British District of Merwāra, about 96 miles north-east of Udaipur city. Population (1901), 2,056. The town contains a post office and a vernacular school, and to the north are the remains of an old fort called Bairātgarh. The estate, which is held

by one of the first-class nobles of Mewār, consists of 117 villages. The income is about Rs. 72,000, and a tribute of about Rs. 3,300 is paid to the Darbār. The Thākurs of Badnor belong to the Mertia branch of the Rāthor clan of Rājputs, and claim descent from Dūda, a younger son of Rao Jodha. The first and most distinguished of the family was Jai Mal, who was killed at Chitor fighting against Akbar in 1567.

Badnūr.—Head-quarters of the District and *tahsīl* of Betūl, Central Provinces, situated in 21° 55′ N. and 77° 54′ E., on the Māchna river, 55 miles from Itārsi station, and 115 miles from Nāgpur by road. A daily mail-cart service connects it with Itārsi. Betūl, the old capital, from which the District takes its name, lies on the Nāgpur road, 3 miles from Badnūr, the latter town having informally become the District head-quarters in 1822, when the Deputy-Commissioner removed his residence to it from Betūl. The population in 1901 was 5,766, and Badnūr is a growing town. At a distance of 4 miles is Kherlā, the former capital of one of the Gond dynasties, where there is an old fort now in ruins. Badnūr was created a municipality in 1867. The municipal receipts during the decade ending 1901 averaged Rs. 9,300. In 1903–4 they were Rs. 9,000, derived principally from a house tax and a grant from Provincial funds. The town is the principal trading centre for Betūl District. A station of the Swedish Mission has been established here; and Badnūr contains an English middle school with a hostel and garden, which were constructed partly from funds raised for a memorial to Queen Victoria. A dispensary is also maintained.

Badrihāt.—Ruins in the Lālbāgh subdivision of Murshidābād District, Bengal, situated in 24° 18′ N. and 88° 15′ E., on the right bank of the Bhāgīrathi, a few miles above Azīmganj. An ancient city with a palace or fort once stood here. Stones and pillars engraved with Pāli characters, gold coins, and much broken pottery have been found; but nothing has yet been discovered which throws any light upon the history of the place. The Pāli inscriptions seem to point to the Buddhist period. The old Hindu name of Badrihāt was changed by the Muhammadans to Ghiyāsābād, in honour of Ghiyās-ud-dīn, one of the Pathān kings of Gaur, who is said to have been buried here.

Badrīnāth.—Peak of the Central Himālayan axis in Garhwāl District, United Provinces, reaching to a height of 23,210 feet above the sea. From the glaciers on its sides the Bishangangā, an affluent of the Alaknandā river, and several other tributaries take their rise. On one of its shoulders, at an elevation of 10,400 feet, and on the road from SRĪNAGAR to the MĀNĀ Pass, stands a shrine of Vishnu, which also bears the name of Badrīnāth (30° 45′ N. and 79° 30′ E.). The original temple is said to have been built by Sankarāchārya; but

several buildings have been swept away by avalanches. The present structure is modern. It is conical in shape, and is surmounted by a small cupola covered with plates of copper and crowned with a gilded ball and spire. Below the shrine a sacred tank stands on the hill-side, supplied from a hot spring by means of a spout in the shape of a dragon's head. Pilgrims of both sexes bathe in the holy pool. The god is daily provided with dinner, and his comfort is carefully ensured in many other ways. The vessels on which he is served are of gold and silver, and a large staff of servants attend to his wants. The chief priest, known as the *Rāwal*, is always a Brāhman of the Nambūri class from Southern India. In 1896 a suit was instituted in the civil court and a scheme of management was framed, by which the *Rāwal* manages the secular affairs of the temple, subject to the control of the Rājā of Tehrī State. A large number of villages have been assigned for the maintenance of the temple, with a revenue demand of about Rs. 7,000. The temple is annually closed about November, when the priests remove the treasure to JOSHĪMATH for the winter, returning to Badrīnāth in May. Immense numbers of pilgrims annually visit Badrīnāth and other shrines in the hills.

Badrpur.—Railway station in Sylhet District, Eastern Bengal and Assam. *See* BADARPUR.

Bādshāhpur.—Town in the Machhlīshahr *tahsīl* of Jaunpur District, United Provinces. *See* MUNGRĀ-BĀDSHĀHPUR.

Bāduriā.—Town in the Basīrhāt subdivision of the Twenty-four Parganas District, Bengal, situated in 22° 45′ N. and 88° 48′ E., on the right bank of the Jamunā river. Population (1901), 12,921, of whom 7,074 were Hindus and 5,847 Muhammadans. The town has a considerable trade in jute, molasses, and sugar. Bāduriā was constituted a municipality in 1869. The income and expenditure during the decade ending 1901–2 averaged Rs. 5,000 and Rs. 4,800 respectively. In 1903–4 the income, which is mainly derived from a tax on persons (or property tax), and the expenditure were each Rs. 5,000.

Badvel Tāluk.—North-eastern *tāluk* of Cuddapah District, Madras, lying between 14° 37′ and 15° 14′ N. and 78° 45′ and 79° 11′ E., with an area of 755 square miles. The population in 1901 was 88,361, compared with 93,152 in 1891, the decrease being greater than in any other *tāluk* in the District. The density is 118 persons per square mile, compared with the District average of 148. It contains two towns, BADVEL (population, 10,883), the head-quarters, and PORUMĀMILLA (5,522); and 111 villages. The demand for land revenue and cesses amounted in 1903–4 to Rs. 1,70,000. The annual rainfall is exactly equal to the District average of 28 inches. More than one-third consists of 'reserved' forests, the best being on the spurs of the NALLAMALAIS which run down into the north-western portion of it.

The chief product is indigo. The *tāluk* suffers from deficient water-supply; it possesses two of the finest tanks in the District—at Badvel and Porumāmilla—but has only one river, the Sagileru. The Sagileru irrigation project, which was completed in 1898–9, consists of a dam across the river and a channel 10 miles long supplying a chain of tanks. It has proved successful, as all the land suitable for cultivation and commanded by it has been readily taken up.

Badvel Town ('the town of cloths').—Head-quarters of the *tāluk* of the same name in Cuddapah District, Madras, situated in 14° 44′ N. and 79° 4′ E., in the valley of the Sagileru, 32 miles from Cuddapah town. Population (1901), 10,833. It lies near a large tank which irrigates a wide extent of land. In the hamlet of Lakshmipālem is an ancient temple to Prasanna Venkateswaraswāmi, and in the town itself are two other old shrines.

Baffa.—Town in the Mānsehra *tahsīl* of Hazāra District, North-West Frontier Province, situated in 34° 26′ N. and 73° 13′ E., on the right bank of the Siran river in the northern corner of the Pakhli plain. Population (1901), 7,029. This is the principal mart of Northern Hazāra and of the neighbouring independent tracts. The municipality was created in 1873. The income during the ten years ending 1902–3 averaged Rs. 4,500, and the expenditure Rs. 4,600. In 1903–4 the income was Rs. 5,300, chiefly derived from octroi; and the expenditure was Rs. 4,700. A vernacular middle school is maintained by the municipality and the District board.

Bāgalkot Tāluka.—South-western *tāluka* of Bijāpur District, Bombay, lying between 16° 4′ and 16° 28′ N. and 75° 26′ and 76° 3′ E., with an area, including the Bilgi petty subdivision, of 683 square miles. It contains one town, BĀGALKOT (population, 19,020), the head-quarters; and 160 villages. The population in 1901 was 123,456, compared with 119,033 in 1891. The density, 181 persons per square mile, is higher than in any other *tāluka*. The demand for land revenue in 1903–4 was 1·25 lakhs, and for cesses Rs. 10,000. An area of about 100 acres is protected from famine by the Muchkundi tank, constructed with a capital outlay (to the end of 1903–4) of over 1½ lakhs. For five years from October, 1903, its water is to be supplied free for non-perennial crops, a rate of Rs. 8 per acre being charged upon land bearing perennial crops. Bāgalkot has the best climate in the District. The annual rainfall averages nearly 24 inches.

Bāgalkot Town.—Head-quarters of the *tāluka* of the same name in Bijāpur District, Bombay, situated in 16° 11′ N. and 75° 42′ E., on the Ghatprabha river, and on the Southern Mahratta Railway. Population (1901), 19,020. Bāgalkot is a place of considerable trade, with manufactures of silk and cotton goods and five cotton-presses. At Muchkundi, about 5 miles to the south-west of Bāgalkot, is a large tank,

constructed for irrigation. Bāgalkot has three markets—an old market and two Jain and Lingāyat markets. The municipality, established in 1865, had an average income during the decade ending 1901 of Rs. 24,000. In 1903-4 the income was Rs. 23,000. The town contains a Subordinate Judge's court, a dispensary, and a municipal middle school. In early times Bāgalkot is said to have belonged to the musicians of Rāvana, the demon king of Ceylon. In the sixteenth century it was in possession of the Vijayanagar kings. From 1664 to 1755 it was under the management of the Savanūr Nawāb, from whom it was taken by the Peshwā. In 1778 it passed to Haidar and again to the Peshwās, who in 1810 handed it over to Nilkanth Rao, *Sarsūbahdār*, who held it until General Munro took it in 1818. Under the Peshwās, Bāgalkot had a mint which was not abolished till 1835. The town contains four boys' schools with 558 pupils, and a girls' school with 80.

Bagasra.—Petty State in KĀTHIĀWĀR, Bombay.

Bagasra.—Town in the Bagasra *tāluka* of the Sorath Prānt, Kāthiāwār, Bombay, situated in 21° 29′ N. and 71° E., 15 miles from Kunkavav on the Bhaunagar-Gondal-Junāgarh-Porbandar Railway. Population (1901), 9,178. It belongs to the Vala Kāthīs, and is the seat of an Agency *thāna*. Bagasra is situated in the vicinity of the Gir, or wild highlands which occupy the centre of the Kāthiāwār peninsula. It was conquered about 1525 by Vala Mancha Bhaiya of Deogām Devli. Square cotton shirts (*chophāls*) and women's scarves (*sādlas*) are manufactured. It is also a mart for the Gir timber.

Bāgdi.—Ancient name for South Bengal. *See* BĀGRI.

Bāgepalli.—Northern *tāluk* of Kolār District, Mysore, including the sub-*tāluk* of Gudibanda, and lying between 13° 37′ and 13° 58′ N. and 77° 39′ and 78° 8′ E., with an area of 447 square miles. The population in 1901 was 65,621, compared with 58,086 in 1891. The *tāluk* contains two towns, Gudibanda (population, 2,384) and Bāgepalli (1,789), the head-quarters; and 372 villages. The land revenue demand in 1903-4 was Rs. 1,47,000. The centre is crossed from north to south by the Dokkala-konda hills, and is covered with low jungle. The east drains to the Pāpaghni, which forms the large Vyāsasamudra tank, and runs a little beyond the border, receiving in the north-east a stream called the Vandaman from the centre. The west is watered by the Chitrāvati, which is dammed for some small channels. Iron ore is found and largely manufactured. There is a good breed of sheep.

Bāgeshwar.—Village in the District and *tahsīl* of Almorā, United Provinces, situated in 29° 51′ N. and 79° 48′ E., at the confluence of the Sarjū and Gomatī, which form a tributary of the Kālī or SĀRDĀ. Population fluctuates considerably, and is about 800 in the autumn. The village was formerly a great trade centre for the exchange of the

produce of Tibet with that of the plains and also imported goods, but the Bhotiā merchants now travel to the submontane marts. Bāgeshwar is also a place of pilgrimage, and contains a temple built about 1450, but an older inscription records a grant to a temple here by a Katyūrī Rājā. There are some curious tombs made of tiles, which are assigned by tradition to Mughal colonies planted by Tīmūr. A dispensary is maintained, and there is a small school with 24 pupils.

Bāgevādi Tāluka.—Central *tāluka* of Bijāpur District, Bombay, lying between 16° 20′ and 16° 46′ N. and 75° 38′ and 76° 16′ E., with an area of 764 square miles. It contains 117 villages, including BĀGEVĀDI (population, 6,159), the head-quarters, and MANGOLI (5,287), but no town. The population in 1901 was 83,620, compared with 102,444 in 1891. The density, 109 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 2·19 lakhs, and for cesses Rs. 17,000. The Don valley in the north is very rich black soil; the rest of the *tāluka* is red trap in the uplands and black soil in the hollows. The annual rainfall averages about 25 inches.

Bāgevādi Village.—Head-quarters of the *tāluka* of the same name in Bijāpur District, Bombay, situated in 16° 34′ N. and 75° 59′ E., 12 miles from Telgi station on the Southern Mahratta Railway. Population (1901), 6,159. According to one account Bāgevādi was the birthplace of Basava, the founder or reviver of the Lingāyat faith. It has a temple of Baseshwar, with shrines of Ganpati, Sangameshwar, Mallikārjun, and Baseshwar. Of the chief wells, one named Basvanna is believed to be of the same age as the Basvanna temple. Bāgevādi is said to have been formerly called Nīlgiri Pattan, and afterwards Bagodi, a contracted form of Bagidā Hode, i.e. a bent ear of *jowār*, to which tradition ascribes the origin of Basvanna. The village contains a dispensary, a boys' school with 167 pupils, and a girls' school with 41.

Bāgh.—Village in the Amjhera district of Gwalior State, Central India, celebrated for the Buddhist excavations in its neighbourhood. It stands at the confluence of the Wāgh or Bāgh and Girna streams, from the former of which it takes its name, in 22° 22′ N. and 74° 48′ E. Population (1901), 1,793. As is usual in places containing Buddhist remains, the village lies on an old main route, that from Gujarāt to Mālwā, close to the Udaipur *ghāt* (pass), 12 miles north of Kukshī. Tradition assigns great importance to the place in early days, and the ruins of a large town are still traceable. This town is said to have been founded in the tenth century by one Rājā Mordhaj, who built the local fort, remains of which are still to be seen. Later on it fell to Rājā Bāgh Singh, whose descendants live in Girwānī close by, and are still locally called Rājā. In the eighteenth century it passed to the Peshwā

and finally to Sindhia. The famous caves, which lie about 4 miles west of the village, are of considerable archaeological interest. As usual, they are locally known as the Pānch Pāndu, the five Pāndava brothers being supposed to have inhabited them. The caves are excavated in the face of a sandstone hill 850 feet above the sea. Owing to the disintegration of a belt of clay stone superimposed on the sandstone, the roofs of most of the caves have been destroyed. All of the caves, which number eight or nine, are *vihāras* or monasteries, there being apparently no *chaitya* hall or Buddhist church attached to them. In age they rank before the latest at Ajanta, and may be assigned to the sixth or seventh century A.D. In a room attached to the largest cave there existed formerly a series of frescoes equalling those at Ajanta. Unfortunately, they were never copied and have now vanished. Fergusson, remarking on the appearance of the figures depicted, considers that they represented people of Central Asia and not of India.

[*Transactions of the Bombay Literary Society*, vol. ii; *Journal of Bombay Branch of the Royal Asiatic Society*, vol. v; and *Indian and Eastern Architecture*, pp. 159, 446.]

Bāghal.—One of the Simla Hill States, Punjab, lying between 31° 5′ and 31° 19′ N. and 76° 52′ and 77° 5′ E., with an area of 124 square miles. Population (1901), 25,720. The capital of the State is Arki, 20 miles north-west of Simla. The Rānās of Bāghal claimed descent from the Ponwār Rājās of Rājputāna. Little is known of the early history of the State, but between 1803 and 1815 it was overrun by the Gurkhas. After their expulsion the British Government reinstated the Rānā. In 1875 the chief, Kishan Singh, was rewarded with the title of Rājā for his services. The present Rājā, Bikram Singh, succeeded in 1904 at the age of twelve. During his minority the administration is conducted by a council, consisting of the brother of the late Rājā and an official deputed by Government. The revenue is Rs. 50,000, out of which a tribute of Rs. 3,600 is paid.

Baghāt.—One of the Simla Hill States, Punjab, lying between 30° 50′ and 30° 58′ N. and 77° 2′ and 77° 12′ E., with an area of 36 square miles. Population (1901), 9,490. The Rānās of Baghāt claim descent from a Rājput family of Dharānagri in the Deccan. In 1805 the Rānā, being in alliance with the Bilāspur State, was allowed to retain his territory by the Gurkhas, but in 1815 five-eighths of it was confiscated and made over to Patiāla. In 1839 the State lapsed in default of a direct heir; but in 1842 it was restored to a brother of the late Rānā, only to escheat again in 1849. In 1860, however, it was once more restored, and Rānā Dalīp Singh, C.I.E., succeeded in 1862. He has proved himself a public-spirited chief. Baghāt has a revenue of Rs. 30,000. The sites for the cantonments of Kasauli and Solon were acquired from the State in 1842 and 1863, the tribute being reduced

as compensation. It was remitted altogether in 1906, in connexion with arrangements concluded with the Rānā for the supply of water to the Sabāthu cantonment.

Bāghāt.—*Tāluk* in Medak District, Hyderābād State, with an area of 451 square miles. The population in 1901, including *jāgīrs*, was 57,073, compared with 52,819 in 1891. There are 110 villages, of which 52 are *jāgīr*, and Mushīrābād (population, 815) is the head-quarters. The land revenue in 1901 was Rs. 75,000. These statistics include the *tāluk* of Ibrāhīmpatan, transferred from Mahbūbnagar District in 1905, which had an area of 393 square miles in 1901, with a population of 46,604. The *paigāh tāluk* of Shamsābād lies to the west, with two villages, a population of 5,446, and an area of about 9 square miles. The name Bāghāt ('gardens') was given to the original *tāluk*, because most of the 'crown' gardens were included in it. The *tāluk* is watered by the river Mūsi and the Husain Sāgar (lake).

Baghelkhand.—A tract adjoining Bundelkhand and forming the easternmost section of the CENTRAL INDIA AGENCY. It lies roughly between 22° 40′ and 25° 0′ N. and 80° 30′ and 82° 57′ E., and derives its name from the Baghela Rājput clan, which has held it during the last six or seven hundred years.

The tract falls naturally into two divisions, separated by the KAIMUR range, which strikes across it from south-west to north-east. The section lying to the west of this range consists, except for a small area in the south, near the town of Maihar, where the Bandair (Bhānder) range terminates, of a wide elevated plain about 1,100 feet above sea-level, while the eastern portion is a rough hilly tract cut up by a succession of long parallel ridges belonging to the Vindhyan system, heavily clothed in jungle. Through the western section runs the TONS river with its tributaries, while the SON and its affluents traverse the eastern section. The geological riches of this region are so varied as almost completely to epitomize the most important formations to be met with throughout Peninsular India. It includes, moreover, the type areas of several important groups, the Rewah, Bandair, Kaimur, Kheinjua, and Sirbu rocks, which derive their names from localities in this region. North of the Kaimur range all subdivisions of the Upper Vindhyan rocks are to be met with, while the Lower Vindhyans are more completely represented here than elsewhere in India, together with the curious volcanic ash-beds known as the porcellanites. The hills in the eastern section of the tract belong mostly to the Bijāwar formation, the underlying gneiss outcropping in the valleys. This region, lying between the Vindhyan outcrop in the north and the Gondwāna in the south, occupies the site of a once lofty range, the materials for both the Vindhyan and Gondwāna sediments being products of its denudation.

The Bijāwar rocks, moreover, exhibit an extraordinarily varied series, in which slates, sandstones, jaspers, bands of iron ore, limestones, basic lavas, and ash-beds are all represented. In the south the Bijāwars and the underlying gneiss abut suddenly on the Gondwānas, which have been most carefully surveyed, on account of their coal-bearing strata (see UMARIĀ). Farther south Cretaceous rocks of the Lameta series and Deccan trap appear, the hill on which Amarkantak stands being formed of the latter rock. The known mineral riches of the region are considerable, and more detailed examination is certain to reveal others; coal, corundum, mica, galena, iron ores, ornamental marbles, red-banded jaspers, and the magnificent building materials furnished by Vindhyan sandstones and limestones are among its known treasures[1].

The hills in the eastern section are covered with heavy jungle, on which the *khair* (*Acacia Catechu*), *sāl* (*Shorea robusta*), *sājā* (*Terminalia tomentosa*), *mahuā* (*Bassia latifolia*), *tendū* (*Diospyros tomentosa*), *achār* (*Buchanania latifolia*), *sālai* (*Boswellia serrata*), and a stunted form of teak are the common trees, while *Grewia*, *Zizyphus*, *Phyllanthus*, *Carissa*, *dhawai* (*Woodfordia*), and similar species predominate in the undergrowth.

The name Baghelkhand, or 'country of the Baghelas,' is of comparatively late origin, and cannot have become common before the seventeenth or eighteenth century, as it is never used by the Muhammadan historians, who invariably style the region Ghora or Bhatghora. Before the Muhammadan period the tract was known as Dāhāla and Chedi, the latter term applying more strictly to the southern districts, now included partly in the Sohāgpur *pargana* of Rewah State and partly in the Central Provinces.

The early Buddhist books, the Mahābhārata, the Rāmāyana, and the Purānas, all connect this region with the Haihaya, Kalachuri, or Chedi clan. Nothing definite is known of the rise of this clan, but the fact that they employ in their dated records an era of which the initial year corresponds to A.D. 249 points to their having become a tribe of local importance somewhere about the third century. Their original habitat is always placed on the Narbadā, with Māhishmati or MAHESHWAR as their capital town. From this position they appear to have been driven eastwards and to have finally acquired Kālinjar, where Krishna Chedi is said to have slain an evil-minded king who practised cannibalism. With this stronghold as a base, they gradually extended their dominions over what is now known as Baghelkhand. During the fourth and fifth

[1] *The Economic Geology of India* (1905); articles on 'Corundum.' 'Mica Deposits of India' in *Memoirs of the Geological Survey of India*, vol. xxxiv; 'The Vindhyan Series,' ibid., vol. vii, p. 1; 'The Southern Coal-fields of the Rewah Gondwāna Basin,' ibid., vol. xxi, p. 137; 'The Geology of the Son Valley,' ibid., vol. xxxi, p. 1; 'Fossil Flora of the Gondwāna System,' Feistmantel and Zeiller in the *Palaeontologia Indica*.

centuries the Gupta dynasty of Magadha was paramount over this region, as is shown by the records of the feudatory chiefs of the Uchhakalpa family and the Parivrājaka Rājās of Kho. In one of these records the king is stated 'to have sought to give prosperity to the kingdom of Dāhāla together with the eighteen forest kingdoms.' Special interest attaches to the term 'forest kingdoms,' as it is also employed by Samudra Gupta in the Allahābād pillar inscription, when detailing his conquests; and it refers no doubt to chiefs of this region, some of whom may possibly have been Haihayas. In the sixth century the Kalachuris must have become a ruling clan of some importance, as the Bādāmi king Mangalīsa records his victory over Buddha Varman Kalachuri of Chedi; and the *Brihat Sanhitā*, written at the same period, mentions the Chaidyas as an important Central Indian tribe. During the latter part of the seventh century the Kalachuris rapidly acquired the sovereignty of the whole tract, which came to be called after them Chedīdesa or the land of the Chedis. Their chief stronghold was Kālinjar, and their proudest title Kālanjarādhīshwara, or 'lords of Kālinjar.' During this period the Chandels were rising to power in Bundelkhand, the Paramāras in Mālwā, the Rāshtrakūtas in Kanauj, and the Chālukyas in Gujarāt and Southern India. The records of these clans relate many of their contests and alliances. The Kalachuris received their first blow at the hand of the Chandel chief Yasovarmma (925–55), who seized the fort of Kālinjar and its surrounding district, he and his successors assuming thenceforth the ancient Kalachuri title of 'lords of Kālinjar.' The Kalachuris were still, however, a powerful tribe and continued to hold most of their possessions until the twelfth century.

It is not quite certain when the Baghelas established themselves in this district. After the advent of the Muhammadans had broken the power of the Kalachuris, the country fell to the Bhars, Chauhāns, Sengars, Gonds, and other clans; and there is no proof that the Baghelas entered the region before the thirteenth century. It is probable that they gained a footing in the thirteenth and fourteenth centuries, after the destruction of their kingdom in Gujarāt by Ulugh Khān in 1296. From this time onward the history of the country becomes that of the Rewah State.

The ancient remains in the tract are considerable and have not as yet been exhaustively examined. The earliest monument dates from the third century B.C., when the Bhārhut *stūpa* (see Nāgod) was erected, while the remains include cave-temples of the fourth and fifth centuries and mediaeval temples of the tenth to the thirteenth century.

The population consists very largely of jungle tribes, of whom the Gonds and Kols are the most numerous. The soils met with are *mār*, a kind of black soil; and *dūmat* and *sigon*, lighter soils found in the alluvial plateau north of the Kaimurs. In the hilly tracts south of

the Kaimur range, the soil is agriculturally of little value. *Kodon* and rice are the two staple food-grains.

Baghelkhand Agency.—A Political Charge in Central India, coinciding practically with the historical area of the same name described above. Of the total area of 14,323 square miles, 13,000 belong to the REWAH STATE, the remainder being divided between eleven minor holdings—BARAUNDĀ, NĀGOD, MAIHAR, SOHĀWAL, KOTHĪ, JASO, PĀLDEO, PAHRA, TARAON, BHAISAUNDA, and KĀMTA RAJAULA. It is bounded on the north by the Mirzāpur, Allahābād, and Bāndā Districts of the United Provinces; on the south by the Bilāspur, Mandlā, and Jubbulpore Districts of the Central Provinces; on the west by Jubbulpore District and the Bundhelkhand Agency, and by a part of Mirzāpur District; and on the east by the Tributary States of Chota Nāgpur. The population in 1901 was 1,555,024, of whom Hindus numbered 1,203,908, or 77 per cent.; Animists, 310,681, or 20 per cent.; Musalmāns, 39,549; and Christians, 165. The density is 109 persons per square mile. The Agency contains six towns: REWAH (population, 24,608), SATNĀ (7,471), MAIHAR (6,802), UMARIĀ (5,381), GOVINDGARH (5,022), and UNCHAHRA (3,785); and 6,556 villages. Satnā is the principal trade centre.

Two metalled roads of importance run through the Agency. One is the great Deccan road, which passes through Rewah, and divides at Mangawān, one branch, partially metalled, leading to Allahābād, and the other to Mirzāpur. The second road leads from Nowgong and Pannā in Bundelkhand to Nāgod, Satnā, and Rewah. The Agency is traversed by the East Indian Railway from Jubbulpore to Allahābād, the principal stations being at Maihar and Satnā, and by the Bengāl-Nāgpur Railway from Katnī to Pendra, with stations at Umariā and Sahdol.

After the disturbances of 1857 a Political officer was attached to the Rewah Darbār, and was at the same time put in charge of the minor holdings of Maihar, Nāgod, Sohāwal, and Kothī. In 1862 this officer was withdrawn at the request of the Rewah Darbār, and these States were placed under the Political Agent in Bundelkhand. In 1871 the Baghelkhand charge was re-established under a separate officer, with head-quarters at SATNĀ. In 1896 the estates of BARAUNDĀ, JASO, and the five CHAUBE JĀGĪRS were transferred from Bundelkhand to Baghelkhand. Rewah alone is held under treaty, the remaining States and estates being *sanad* holdings. All transit dues in the Agency have been abolished.

The Political Agent exercises the usual general supervision over the affairs of the States, and in the case of all but Rewah personally deals with crimes of a heinous character. For that portion of the Jhānsi-Mānikpur section of the Great Indian Peninsula Railway which lies

in the estates of Pahra and Taraon, the Political Agent exercises the powers of a District Magistrate and a Court of Sessions. The Agency Surgeon supervises medical arrangements.

The Agency contains the following States and estates:—

Name of State or estate.	Title of chief.	Caste or clan of chief.	Area in square miles.	Population (1901).	Total revenue.
					Rs.
Rewah . .	H. H. Mahārājā	Baghel Rājput .	13,000	1,327,385	29,00,000
Baraundā .	Rājā .	Raghuvansi Rājput . .	218	15,724	15,000
Nāgod . .	Rājā . .	Parihār Rājput .	501	67,092	1,72,000
Maihar . .	Rājā . .	Kachwāha Rājput	407	63,702	75,000
Sohāwal . .	Rais (Rājā) .	Baghel Rājput .	213	37,216	46,000
Kothī . .	Rājā Bahādur .	Baghel Rājput .	169	19,112	26,000
Jaso . .	Dīwān . .	Bundelā Rājput .	72	7,209	23,000
Pāldeo . .	Chaube . .	Jijhotia Brāhman	28	8,598	26,000
Pahra . .	Chaube . .	Jijhotia Brāhman	27	3,535	13,000
Taraon . .	Chaube . .	Jijhotia Brāhman	26	3,178	10,000
Bhaisaunda .	Chaube . .	Jijhotia Brāhman	32	4,168	9,000
Kāmta Rajaula	Rao . . .	Kāyasth . .	13	1,232	2,500
Railways and cantonments .	... ...	... ...	...	2,148	...
		Total	14,706	1,560,299	33,17,500
Deduct—Figures for portions of Rewah and Nāgod lying outside the Agency . . .			383	5,275	...
		Total for Baghelkhand Agency	14,323	1,555,024	33,17,500

Bāgherhāt Subdivision.—Eastern subdivision of Khulnā District, Bengal, lying between 21° 44′ and 22° 59′ N. and 89° 32′ and 89° 58′ E., with an area of 679 square miles. The north of the subdivision is low-lying and contains numerous swamps, but the country is more open and there is less jungle than in the Sātkhira subdivision. To the south the country merges in the Sundarbans, where the land is being steadily reclaimed. The population in 1901 was 363,041, compared with 340,559 in 1891, the density being 535 persons per square mile. The subdivision contains 1,045 villages, but no town. Its head-quarters are at BĀGHERHĀT, a place containing several antiquities of interest. The chief trade centres are MORRELGANJ and KACHUĀ.

Bāgherhāt Village.—Head-quarters of the subdivision of the same name in Khulnā District, Bengal, situated in 22° 40′ N. and 89° 47′ E., on the Bhairab river. Population (1901), 1,124. In the neighbourhood are the ruins of several buildings left by Khānja Alī, the pioneer settler in the Sundarbans (*see* KHULNĀ DISTRICT), including a brick-built road from the bank of the Bhairab, a large hall known as the Shāt Gumbaz, and the mausoleum of Khānja Alī. There is a large bi-weekly market, and an annual fair lasting for a month is held on the

occasion of the Srīpanchamī. The village contains the usual public offices, a sub-jail with accommodation for 35 prisoners, and a Government-aided school.

Bāghpat Tahsīl.—North-western *tahsīl* of Meerut District, United Provinces, comprising the *parganas* of Bāghpat, Baraut, Kutānā, and Chhapraulī, and lying between 28° 47′ and 29° 18′ N. and 77° 7′ and 77° 29′ E., with an area of 405 square miles. The population rose from 259,656 in 1891 to 297,506 in 1901. There are 218 villages and six towns, the chief of which are BARAUT (population, 7,703), BĀGHPAT (5,972), the *tahsīl* head-quarters, KHEKRĀ (8,918), and CHHAPRAULĪ (7,058). In 1903-4 the demand for land revenue was Rs. 6,65,000, and for cesses Rs. 1,07,000. The density of population is high, being 735 persons per square mile. The *tahsīl* lies between the Jumna and Hindan; but even the narrow *khādars* of those rivers are fairly fertile, and a great part consists of an excellent loam, while ample irrigation is provided by the Eastern Jumna Canal. In 1903-4 the area under cultivation was 336 square miles, of which 190 were irrigated.

Bāghpat Town.—Head-quarters of the *tahsīl* of the same name in Meerut District, United Provinces, situated in 28° 57′ N. and 77° 13′ E., near the Jumna, 30 miles west of Meerut city by a metalled road. Population (1901), 5,972. Bāghpat is identified with the Vyāghraprastha or 'place of tigers' of the Mahābhārata, and its name is said to have been changed from Bāgpat to Bāghpat by one of the Delhi emperors. The town is divided into two portions: the *kasba* or agricultural quarter, and the *mandī* or commercial quarter. Besides the *tahsīlī*, it contains a dispensary, and a branch of the American Methodist Mission. From 1869 to 1904 the place was administered as a municipality, with an average income and expenditure of Rs. 6,000, the chief tax being octroi. It has now been constituted a 'notified area.' Formerly Bāghpat was the chief centre of the sugar trade with the Punjab, but Meerut and other towns have now taken its place to a large extent. In 1904 it contained three schools with 137 pupils.

Bāglān.—A tract of country north of the Sātmāla Hills in Nāsik District, Bombay, which is now represented by the BĀGLĀN and KALVĀN *tālukas*. Bāglān is a region of hills and streams, and has long been noted for the excellence of its garden cultivation.

In the earliest times of which record remains, the tract appears to have been held by a family of Rāthors, claiming kinship with the Rāthors of Kanauj, and to have formed a prosperous principality by reason of the fact that through it ran the main line of traffic between the Deccan and Gujarāt. Up to the commencement of the seventeenth century the Rāthors of Bāglān, who adopted the honorific title of Baharji, and coined their own money, wielded considerable power;

but they were from time to time reduced to the position of tributaries by the Sultāns of Gujarāt or the overlords of the Northern Deccan. The first authentic notice of Bāglān is in 1298, when Rai Karan, the last king of Anhilvāda, after his defeat by Ulugh Khān, fled thither and maintained himself as an independent chieftain with the aid of Rāmdeo of Deogiri. It is probable that at this date the Rāthors of Bāglān were tributaries of the Yādavas of Deogiri. After the overthrow of Rāmdeo, the country became an apanage of the Musalmān rulers of Deogiri; but in 1347, during the disturbances which resulted in the Deccan becoming independent of Delhi, it passed out of the possession of the Bahmani kings. Thus in 1366 the Bāglān chief is mentioned as allying himself with the rebel Bairam Khān against Muhammad Shāh Bahmani I; while five years later, when Malik Rājā, the founder of the Fārūki dynasty, established himself in Khāndesh, the chief was forced to become a tributary of Delhi. During the fifteenth century Bāglān was subject to the Ahmadābād Sultāns, and in 1429 was laid waste by Ahmad Shāh Bahmani I; and save for a short period commencing in 1499, when the Bāglān chiefs were forced to recognize the overlordship of the Nizām Shāhi dynasty of Ahmadnagar, they remained vassals of Ahmadābād until Akbar's conquest of Gujarāt in 1573. The country is described in the *Ain-i-Akbarī* (1590) as a mountainous and populous region between Surat and Nandurbār, in which excellent fruit of various kinds was grown. The chief was a Rāthor in command of 8,000 cavalry and 5,000 infantry, and possessed seven fortresses, two of which, Mulher and Sālher, were posts of exceptional strength.

On his conquest of Khāndesh in 1599, Akbar attempted to take Bāglān; but after a seven years' siege was forced to compound with the chief, Pratāp Shāh, giving him several villages in return for an undertaking to protect all merchants passing through his territory, to send presents to the emperor, and to leave one of his sons as a hostage at Burhānpur.

Bairam Shāh, who succeeded Pratāp Shāh, was attacked and reduced to the position of a vassal by Aurangzeb in 1637. A description of the country at that date is given in Elliot's *History of India*, vol. vii. A temperate climate, abundance of water, and the cultivation of excellent fruit combined to render it famous. It measured 200 miles in length by 160 in breadth, and contained 30 petty subdivisions and about 1,000 villages. It was bounded on the north by Sultānpur and Nandurbār; on the east by Chandor; on the south by Trimbak and Nāsik; and on the west by Surat and the territory of the Portuguese. Tavernier (1640–66) speaks of Bāglān as containing a large variety of valuable trees, vast quantities of antelope, hare, and partridge, and wild cows (probably bison) in its more mountainous parts. Sugar-cane was largely grown and supplied many sugar-mills and furnaces; and

the country generally derived much profit from the continuous stream of traffic between Surat and Golconda, which passed along its well-protected highways.

Between 1670 and 1672 the Marāthās appeared and succeeded in taking Sālher fort, which, however, was eventually restored to the Muhammadans in 1684. Under the rule of the Nizām, who rose to independent power in the Deccan in 1724, a commandant was appointed to Mulher and a governor to Bāglān; and this system seems to have been followed till 1795, when Bāglān was ceded by the Nizām to the Peshwā, who placed it, together with Khāndesh, in charge of a *Sarsūbahdār*. The fort of Sālher is supposed to have been granted by the Peshwā to Rānī Gahinābai, wife of Govind Rao Gaikwār, who, after the battle of Dhodap (1768), remained for some time at Poona as a state prisoner and afterwards ruled at Baroda from 1793 to 1800. On the overthrow of the Peshwā, Mulher fort was surrendered to the English on July 3, 1818, and the territory of Bāglān was incorporated in Khāndesh District. In 1869 Bāglān was transferred to Nāsik District; and in 1875 it was, with its petty subdivisions of Jaikhedan and Abhona, formed into two *tālukas*—Bāglān and Kalvān.

Bāglān Tāluka (or Satāna).—*Tāluka* of Nāsik District, Bombay, lying between 20° 26′ and 20° 53° N. and 73° 51′ and 74° 24′ E., with an area of 601 square miles. There are 156 villages, but no town. The head-quarters are at Satāna. The population in 1901 was 64,645, compared with 65,562 in 1891. The density, 108 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was 1·8 lakhs, and for cesses Rs. 12,000. The chief river is the Mosam. Bāglān is noted for its garden tillage. The western portion of the *tāluka* is marked by steep and narrow ridges, running nearly east and west, which are usually crowned by perpendicular ledges of rock. The summits are in some places fortified. Between the ridges lie narrow valleys seamed by the beds of torrents. To the east and south the country is more open and level, with sparse isolated groups of flat-topped hills. Even in the level parts much of the land is fallow and covered with brushwood. The climate, especially in the west, is malarious after the rains; but at other seasons it is healthy and cool. The annual rainfall averages about 20 inches. In 1875 Satāna, with its two petty subdivisions or *pethas* of Jaikhedan and Abhona, was divided into two *tālukas*—Bāglān and Kalvān.

Bāglī.—*Thakurāt* in Mālwā Agency, Central India.

Bāgni.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 16° 55′ N. and 74° 26′ E., 4 miles south-west of Ashta. Population (1901), 5,641. Bāgni is a large agricultural village alienated to the junior branch of the Mantri family, the senior branch of which lives at Islāmpur. The village, which contains a fortified citadel,

encompassed by lofty walls and a deep moat, was formerly an outpost of the Bijāpur kingdom. The relics of Muhammadan rule include a handsome mosque to the east of the village, and a mausoleum covered with a fine brocade presented by the Mantri family.

Bāgor.—Head-quarters of a *pargana* or subdivision of the same name in the State of Udaipur, Rājputāna, situated in 25° 22′ N. and 74° 23′ E., on the left bank of the Kothāri river, a tributary of the Banās, about 70 miles north-east of Udaipur city. Population (1901), 2,353. The *pargana* of Bāgor, which consists of 27 villages, was formerly a *jāgīr* estate, and the four immediate predecessors of the present Mahārānā were all of the Bāgor house.

Bāgri (or Bāgdi).—Ancient name for South Bengal, said to have been given by king Ballāl Sen in the eleventh century to the portion of the Gangetic delta immediately east of the Bhāgīrathi river, corresponding with the southern Districts of the modern Presidency Division. The caste of Bāgdis either derived their name from this tract or gave their name to it.

Bāgru.—Town in the State of Jaipur, Rājputāna, situated in 26° 48′ N. and 75° 33′ E., on the Agra-Ajmer road, about 18 miles south-west of Jaipur city. It is the residence of a *thākur*, who serves the Jaipur Darbār with fourteen horsemen but pays no tribute. The place is famous for its dyed and stamped chintz, but the industry has suffered owing to cheap foreign imitations. There are two elementary indigenous schools attended by 28 boys.

Bāh.—South-eastern *tahsīl* of Agra District, United Provinces, conterminous with the *pargana* of the same name, lying between 26° 45′ and 26° 59′ N. and 78° 12′ and 78° 51′ E., with an area of 341 square miles. The *tahsīl* is sometimes called Pināhat. Population decreased from 125,848 in 1891 to 123,591 in 1901. There are 204 villages and one town, Bāh (population, 3,867), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,09,000, and for cesses Rs. 28,000. The density of population, 362 persons per square mile, is the lowest in the District. The *tahsīl* is almost an island, being cut off from the rest of the District by the Utangan and Jumna on the north, and from the Gwalior State by the Chambal on the south. While the average breadth between these rivers is 8 or 9 miles, the wild maze of deep ravines which fringes them reduces the comparatively level central tract to a width of 4 or 5 miles. The villages in this area are perched on almost inaccessible positions—a memorial of the time when security was required against the revenue collector and foreign invaders. While the actual ravines are totally barren, and do not produce even trees, the low-lying land, here called *kachhār*, is exceptionally fertile. This is especially the case near the Chambal, where black soil, called *mār* as in Bundelkhand, is common. The Utangan *kachhār*, though of

different composition, is equally fertile, while the Jumna lowlands are poorer. In 1903–4 the area under cultivation was 190 square miles, of which only 12 were irrigated, almost entirely from wells. The great depth of spring-level and the cost of irrigation make this tract peculiarly liable to distress in dry seasons, and it was the only *tahsīl* in the District which lost in population between 1891 and 1901.

Bahādrān.—*Tahsīl* and head-quarters thereof in Bīkaner State, Rājputāna. *See* BHĀDRA.

Bahādurgarh.—Former name of ISĀGARH ZILA, Gwalior State, Central India.

Bahādurgarh.—Town in the Sāmpla *tahsīl* of Rohtak District, Punjab, situated in 28° 41′ N. and 76° 56′ E., 18 miles west of Delhi on the Rohtak road, and on the Southern Punjab Railway. Population (1901), 5,974. The name of the town was originally Sharafābād. It was given in *jāgīr* to Bahādur Khān and Tāj Muhammad, Baloch chiefs of Farrukhnagar, in 1754, and its name changed to Bahādurgarh. The *jāgīr* was resumed in 1793 by Sindhia, and in 1803 the town and the surrounding villages were bestowed by Lord Lake on Ismail Khān, brother of the Nawāb of Jhajjar. The estate was confiscated in 1857, owing to the disloyalty of the chief, Bahādur Jang. The municipality was created in 1873. The income and expenditure during the ten years ending 1902–3 averaged Rs. 6,600. Both income and expenditure in 1903–4 amounted to Rs. 6,400, the income being chiefly from octroi. The town is of no commercial importance. The municipality maintains a vernacular middle school and a dispensary.

Bahalda.—Village in Mayūrbhanj, one of the Orissa Tributary States in Bengal, situated in 22° 23′ N. and 86° 5′ E. Population (1901), 1,724. Bahalda is the head-quarters of the Bāmanghāti subdivision of the State, and is connected with Baripādā, the capital, by a metalled road.

Bahāwalpur State.—Native State under the political control of the Government of the Punjab, lying in the extreme south-west of the Province, between 27° 42′ and 30° 25′ N. and 69° 31′ and 74° 1′ E., with an area of 15,918[1] square miles. On the north-east it adjoins Ferozepore District; and on the north-west the Sutlej separates it from Montgomery and Multān Districts, and, after its junction with the Chenāb, from Muzaffargarh District. The Indus then divides it from the Punjab District of Dera Ghāzi Khān and the Upper Sind Frontier District in Sind, the latter also adjoining it on the south. On the south-east it is bordered by the Rājputāna States of Jaisalmer

[1] These figures do not agree with the area given in Table III of the article on the PUNJAB, and on p. 197 of this article, which is the area returned in 1901, the year of the latest Census. They represent a more recent survey.

and Bīkaner. Its length from north-east to south-west is about 300 miles, and its mean breadth 40 miles. Devoid of hills and streams, except the pools and backwaters of the three great rivers, it is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert, known as the Rohi or Cholistān; the central tract is chiefly desert, not capable of cultivation, identical with the Bār or Pat uplands of the western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The desert is separated from the central tract by a depression known as the Hakra, which must at one time have carried the waters of a large river. Opinions are divided as to whether this river was the Sutlej, the Ghaggar, or the Jumna.

Physical aspects.

The State lies entirely in the alluvium. The Cholistān is a deep mass of sand in which wells fail to reach a substratum of clay, and which is at some places overlaid with deposits of amorphous sulphate of lime, while its surface is a succession of sand-dunes, rising in places to a height of 500 feet, and covered with the vegetation peculiar to sandy tracts. The central upland is a stiff clay mixed with sand, and the riverain tract is a micaceous soil with alternating layers of light bluish silt.

The flora of the State is as varied as its natural divisions. The scenery of the fertile riverain with its countless palms is almost Egyptian in character, and the lotus abounds in the pools by the river. In the uplands and in the Sind tamarisk jungles stretch for miles; and in the Rohi there are stretches of *khār* (*Caroxylon Griffithii*), from which the State derives an income of more than Rs. 30,000.

Wolves are found in the Sind and Rohi, and the wild ass occurs in the latter. Hog and hog deer abound in the Sind, and antelope, *chinkāra*, or 'ravine deer,' and *nīlgai* in the uplands. Fish are common in the rivers, and the State derives a small income from the fisheries which are leased to the Jhabel, Mor, and Kehal—three indigenous tribes of almost amphibious habits.

'In Bahāwalpur,' says a local proverb, 'rain changes into storms of wind.' In July and August showers fall occasionally, but the annual rainfall rarely exceeds 5 inches. This deficiency of rain causes a climate abnormally hot in spite of its extra-tropical latitude; and from the end of April to the middle or end of June the mean shade temperature is 103°, the air is dry and the wind fiery, so that the growth of vegetation is imperceptible. During the monsoon clouds soften the temperature, and with only an inch of rain the country becomes fresh and green. After November the mean temperature falls to 60° or 65° with frosty nights. The climate is generally healthy, except in the Sind during the autumn. The water is bad in some places, and it is to this cause that the frequency of stone and scurvy is attributed. Spleen-disease is common.

Floods are said to be less frequent than they were before the great

Punjab canals were made. The flood of 1871, which covered some 1,300 square miles of the lowlands, threw large areas out of cultivation for a whole year.

History. The Abbāsi Daudputras, from whom the ruling family of Bahāwalpur has sprung, claim descent from the Abbāsid Khalīfs of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrāni empire, the mint at Bahāwalpur being opened in 1802 by Nawāb Muhammad Bahāwal Khān II with the permission of Shāh Mahmūd of Kābul. On the rise of Ranjīt Singh, the Nawāb, Muhammad Bahāwal Khān III, made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjīt Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahāwalpur was negotiated in 1833, the year after the treaty with Ranjīt Singh for regulating traffic on the Indus. It secured the independence of the Nawāb within his own territories, and opened up the traffic on the Indus and Sutlej. The political relations of Bahāwalpur with the paramount power, as at present existing, are regulated by a treaty made in October, 1838, when arrangements were in progress for the restoration of Shāh Shujā to the Kābul throne.

During the first Afghān War, the Nawāb rendered assistance both in facilitating the passage of troops and in furnishing supplies; and in 1847-8 he co-operated actively with Sir Herbert Edwardes in the expedition against Multān. For these services he was rewarded by the grant of the districts of Sabzalkot and Bhung, together with a life-pension of a lakh. On his death a dispute arose regarding the succession. He was succeeded by his third son, whom he had nominated for the throne in supersession of his eldest son. The new ruler was, however, deposed by his elder brother, and obtained asylum in British territory, with a pension from the Bahāwalpur revenues; he broke his promise to abandon his claims, and was confined in the Lahore fort, where he died in 1862. In 1863 and 1866 insurrections broke out against the Nawāb, caused by cruelty and misgovernment. The Nawāb successfully crushed the rebellions; but in March, 1866, he died suddenly, not without suspicion of having been poisoned, and was succeeded by his son, Nawāb Sādik Muhammad Khān IV, a boy of four. After several endeavours to arrange for the administration of the country without active interference on the part of Government, it was found necessary, on account of disorganization and disaffection, to place the principality in British hands during his minority. The Nawāb attained his majority in 1879, and was invested with full powers, with the advice and assistance of a council of six members. During the Afghān campaigns (1878-80) the Nawāb placed the entire resources of his State at the disposal of the British

Government, and a contingent of his troops was employed in keeping open communications, and in guarding the Dera Ghāzi Khān frontier. On his death in 1899 he was succeeded by Muhammad Bahāwal Khān V, the present Nawāb[1], who attained his majority in 1901, and was invested with full powers in 1903. The Nawāb of Bahāwalpur is entitled to a salute of 17 guns.

The principal archaeological remains are described in the articles on BIJNOT, MAROT, PATTAN MUNĀRA, SARWĀHI, SUI VEHĀR, and UCH.

Population.

The State contains 10 towns and 1,008 villages. The population at the three last enumerations was: (1881) 573,494, (1891) 650,042, and (1901) 720,877. It is divided into the three *nizāmats* or administrative subdivisions of Bahāwalpur, Minchinābād, and Khānpur, which derive their names from their headquarters. The chief towns are BAHĀWALPUR, the modern capital of the State, AHMADPUR EAST, KHĀNPUR, UCH, AHMADPUR WEST, and KHAIRPUR.

The following table gives the chief statistics of population in 1901:—

Nizāmat.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Minchinābād	3,528	2	556	180,901	51·2	+ 8·96	4,205
Bahāwalpur	7,079	4	268	260,696	36·8	+ 11·5 (Bahāwalpur and Khānpur together)	16,104 (Bahāwalpur and Khānpur together)
Khānpur	5,311	4	184	279,280	52·6		
State total	15,000	10	1,008	720,877	48·0	+ 10·9	20,309

NOTE.—The figures for the areas of *nizāmats* are taken from revenue returns. The total State area is that given in the *Census Report*. Since 1901, 551 square miles have been transferred from Khānpur to Bahāwalpur, and the population given in the table is, in the case of each *nizāmat*, the population in 1901 of the territory now comprised in that *nizāmat*.

About 83 per cent. of the people are Muhammadans. Since 9,881 square miles of the State are desert, the density of population appears low as compared with the Provincial average of 185, but the Sind tract is somewhat thickly populated and has gained considerably by immigration from the Punjab. Three-fourths of the people speak the dialect of Western Punjābi known locally as Multānī or Bahāwalpurī. This is spoken all along the river from Khairpur to Ahmadpur West and southwards to the Cholistān. Punjābi, also called Jatkī (the Jat speech), and Ubhechar or Eastern, extends from Khairpur to the north-east border, while west of Ahmadpur West and round Kot Sabzal and Fatehpur Māchkā Sindī and Bahāwalpurī are spoken. In the Cholistān the Mārwārī-Rāthī dialect of Rājasthānī prevails.

[1] Nawāb Muhammad Bahāwal Khān V died at sea in February, 1907, while returning from a pilgrimage to Mecca. His son, who succeeds as Nawāb, Hāji Sādik Muhammad Khān V, Abbāsi, is only two years of age.

The most important of the landowning tribes are the Jats, who number 192,000 and comprise 26 per cent. of the population, Rājputs (107,000), and Balochs (65,000). Other agricultural tribes are the Arains (38,000), Daudputras (19,000), Khokhars (17,000), Pathāns (11,000), and Kharrals (6,000). The only commercial class, the Aroras, numbers 66,000. Of the menials, the most important are the Māchhis (fishermen, 23,000), Kumhārs (potters, 11,000), Mallāhs (boatmen, 10,000), Julāhās (weavers, 9,000), Mochīs (shoemakers, 10,000), Jhinwārs (water-carriers, 8,000), and Tarkhāns (carpenters, 8,000). Saiyids number 11,000 and Shaikhs 14,000. The native Christians number only 6. About 58 per cent. of the population are dependent on agriculture.

Agriculture.

The three natural tracts have already been described. The Rohi or Cholistān, bounded on the north and west by a depression called the Hakra, is pure desert, in which crops depend wholly on the scanty rainfall, and the vegetation is sparse. Unbricked wells are sunk, but their excavation in the sandy soil is a perilous task, as the spring-level is 80 feet below the surface. The second tract runs parallel to the Rohi. Its soil is a stiff clay mixed with sand, and though cultivation depends chiefly on the rainfall, wells are also worked. The third and richest tract in the State is the Sind or alluvial strip along the rivers. Every year its soil is enriched by floods, which leave a deposit of rich silt, and the land yields fine crops with little labour. The supply of water to the Sind is supplemented by a system of inundation canals and by wells. Large areas have been brought under cultivation during the last twenty-five years, owing to the extension of the system of inundation canals. Half a million acres of State land, which now brings in a revenue of 3 lakhs, have been leased to cultivators, the leases in most cases containing the promise of proprietary rights after a period of years. There is abundance of room for the extension of colonization in the Khānpur *nizāmat*.

The following table shows the chief statistics of cultivation in 1903–4, areas being in square miles:—

Nizāmat.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Bahāwalpur	7,079	417	370	580
Mīnchinābād	3,528	515	419	1,200
Khānpur	5,311	519	572	1,427
Total	15,918	1,451	1,361	3,207

The crops which covered the largest area in 1903–4 were wheat (607 square miles), rice (183), spiked millet (90), great millet (85), and gram (82).

Although rules sanctioning advances were passed in 1879, they were

not made to any useful extent by the State till 1900, when Rs. 7,20,000 was advanced to cultivators for the sinking of 1,280 new wells and the repair of 159 old ones. Up to 1904 about 8 lakhs had been thus advanced.

The commonest domestic animals are the bullock and the buffalo. There is also a large number of camels in the State, many of which are employed in the Imperial Service Camel Corps.

Of the total area cultivated in 1903-4, 1,361 square miles, or nearly 94 per cent., were irrigated. Of this area, 204 square miles were irrigated from both wells and canals, 14 from wells alone, 993 from canals, and 150 by inundation from the rivers. In that year the State contained 17,220 masonry wells, besides 2,420 unbricked wells. The State has a vast system of inundation canals which take off from the rivers, especially from the Sutlej.

Cash rents are very rare. Produce rents vary from one-fifth on unirrigated lands to one-half on some of the canal-irrigated and inundated lands in parts of the Khānpur and Bahāwalpur *nizāmats*. The rent of canal-irrigated land in these two *nizāmats* rules higher than in Minchinābād, where the tenant is responsible for the cost of canal clearance. Throughout the State, landlords realize in addition to the rent a number of dues of varying amounts. The occupancy tenant of the British Punjab is unknown in Bahāwalpur. Cash wages have risen very largely in the last few years, but except in towns the wages of labour are generally paid in kind.

Forests cover an area of 412 square miles; but of this a large portion is merely treeless waste, which is being gradually colonized by settlers from British Districts and other States, as well as by the people of Bahāwalpur itself. During the minority of the late Nawāb extensive plantations were established, and these now yield a large income. The forests, plantations, and gardens realized an income of Rs. 1,60,000 in 1903-4. The chief forest officer is the *Mohtamim janglāt*, and the department is controlled by the Mushīr-i-āla.

Kankar abounds in several places, especially in the McLeodganj *ilāka* of the Minchinābād *tahsīl*. Saltpetre is also made from saline earth in several villages in the Minchinābād and Khairpur *tahsīls*.

Trade and communications.

The only arts of any importance are the manufacture of silk *lungīs* (ornamental turbans) and *sufis* (silk cloth). Metal cups are made at Bahāwalpur and Khānpur towns, while a very lucrative industry is the manufacture of impure carbonate of soda, which is exported in large quantities, especially from the Bahāwalpur *tahsīl*. Ahmadpur East and Khairpur are noted for their porcelain vessels and shoes, and the latter also for its painted cloth of various kinds. The last decade has witnessed considerable industrial development on modern lines. Nine rice-husking mills

have been established—one at Bahāwalpur, three at Khānpur, two at Allahābād, and one each at Sādikābād, Kot Samāba, and Naushahra. Cotton-ginning is also carried on in the mills at Bahāwalpur and Kot Samāba, and in one of the Khānpur mills.

The trade of the State is free, all transit dues having been abolished under treaty with the British Government. The principal exports are wheat, gram, indigo, dates, mangoes and other fruit, wool, saltpetre, and the manufactured articles mentioned above. Cloth and *gur* (unrefined sugar) are the chief imports.

The Lahore-Karāchi branch of the North-Western State Railway enters the State at the centre of its north-west border by the Adamwāhan bridge across the Sutlej, and leaves it at Walhar in the extreme south-west, with a length of 148 miles within the State. This line is joined at Samasata by the Southern Punjab Railway, which enters the State near McLeodganj Road, 156 miles from Samasata, and has a branch to Ferozepore. There are 624 miles of unmetalled and about 40 miles of metalled roads.

The postal arrangements are peculiar. In return for an annual payment of Rs. 6,000, they are undertaken by the British Post Office. Official letters are conveyed free within the State, and the Postal department supplies service stamps free of charge to the value of Rs. 1,300 annually, for purposes of official correspondence outside the State. These arrangements have been in force since 1878.

Famine.

Famine in Rājputāna always causes a stream of immigration into Bahāwalpur, and in recent years the State has invariably made a point of providing work for the refugees. In 1899 the number of immigrants was 40,000. The able-bodied were employed on the canals, and many of the others were admitted into poorhouses. The total cost to the State of the relief measures was 2·5 lakhs.

Administration.

The direct functions of administration are exercised by the Nawāb, who is assisted by a council of eleven members, comprising the Mushīr-i-āla or Wazīr (who is the president of the council), the foreign minister, the revenue minister, the chief judge, the finance minister, the commander-in-chief of the State forces, the minister of public works, the minister of the Nawāb's household, the private secretary, the general secretary, and the minister of irrigation. The Political Agent for the Phūlkiān States and Bahāwalpur resides at Patiāla.

Each *nizāmat* is divided into three *tahsīls*. The nine *tahsīls* are Minchinābād, Nahr Sādikīyāh, Khairpur, Bahāwalpur, Ahmadpur, Allahābād, Khānpur, Naushahra, and Ahmadpur Lamma. Each *nizāmat* is in charge of a *nāzim*, and each *tahsīl* is in charge of a *tahsīldār* and a *naib-tahsīldār*.

The Mushīr-i-Māl or revenue minister exercises general revenue control in the State. The *nāzims*, *tahsīldārs*, and *naib-tahsīldārs* are subordinate to him in all matters connected with his functions. The State canals are in charge of a special minister.

Bills are introduced by the member in charge of the department concerned, and, after approval by the council, are submitted to the Nawāb for his final assent. A large number of the Acts in force in British India have been adopted, including the Penal Code and the Procedure Codes.

The principal court is the *Sadr Adālat*, established in 1870. It consists of a single judge called the chief judge, under whom are three district judges and five first-class and three second-class Munsifs. The district judges hear suits up to Rs. 10,000 in value, and also exercise the powers of magistrates with enhanced jurisdiction under sections 30 and 34 of the Code of Criminal Procedure. The first-class Munsifs exercise the powers of first-class, and the second-class Munsifs those of second-class magistrates and Munsifs in British territory. The judicial department is also in charge of registration, the chief judge being chief registrar, the district judges registrars, and the Munsifs sub-registrars. Pleaders are not admitted to practise in the State courts. The commonest forms of crime are cattle-theft and the abduction of women.

Prior to 1886 the State issued two rupees, the *Bahāwalpuri*, worth 12 annas, and the *Ahmadpuri*, worth 10 annas in British currency. It also coined gold *mohars*, Rs. 16 to Rs. 52 in value. It still coins a copper *nikka paisa* (or small pice), 2½ of which equal the British quarter anna. British coin is now current throughout the State.

The following table shows the revenue of the State in recent years, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	9,45	10,65	13,65	14,35
Total revenue. .	14,43	16,39	22,94	26,93

Apart from land revenue, the principal receipts in 1903-4 were forests (1·6 lakhs), and stamps (Rs. 98,000). The expenditure was chiefly: on the Nawāb's court and household (12·8 lakhs), public works (3 lakhs), army (2·2 lakhs), police (1·5 lakhs), pensions (1·1 lakhs), and revenue administration (1·1 lakhs). There was a reserve balance in the State treasury at the end of the year of nearly 26 lakhs.

Prior to 1866 the land revenue was mostly collected in kind, by division (*batai*) of the produce, the State taking one-fourth, one-third, or even two-fifths. In 1868 this system was abolished, and fixed assessments were imposed on each kind of crop. These rates were

reduced in 1871–2, owing to a fall in prices. The summary settlements were completed in 1877, resulting in a revenue demand of 9·5 lakhs. The assessments were revised in 1889–91, and the revenue was raised to 11·3 lakhs. A further revision is now in progress. In the Bahāwalpur and Khānpur *nizāmats*, where the reassessment was completed in 1905, the increase amounts to 3·4 lakhs. Members of the Daudputra tribe, to which the Nawāb belongs, hold revenue grants of the annual value of Rs. 74,000 on feudal conditions which are now obsolete. The revenue rates on cultivated lands vary from 8 annas per acre (unirrigated) to Rs. 5 per acre for gardens. The income from the grazing tax (*tirni*) in 1903–4 was 1·3 lakhs.

The Excise department is controlled by the Mushīr-i-Māl. The contract for the manufacture and vend of country spirits is sold by auction annually, and in 1903–4 the State realized Rs. 25,000. The contractor arranges for the retail sale of the liquor, subject to the sanction of the department. The system in regard to the contract for the sale of opium and drugs is similar; Rs. 34,000 was realized for the contract in 1903–4. The import of opium from Bahāwalpur into the British Punjab is prohibited. The State receives an allotment of 15 chests of Mālwā opium per annum, each chest containing 1·25 cwt. The State pays a special duty of Rs. 280 per chest, instead of the ordinary duty of Rs. 725; but the duty so paid is refunded with a view to securing the co-operation of the State officials in the suppression of smuggling. By the agreement of 1879, the Nawāb is bound to prohibit and prevent the manufacture of salt within the State, and in return receives a subsidy of Rs. 80,000 from the British Government.

The State contains sixteen municipalities, the committees being composed of nominated official and non-official members. Each is under the Mushīr-i-āla as *ex-officio* president, and the Bahāwalpur committee has one official vice-president, who also supervises the outlying municipalities. In 1903–4 the municipalities had an income, chiefly derived from octroi, of Rs. 88,000, and an expenditure of Rs. 82,000. Octroi is levied on the principles in force in British territory.

The Public Works department is under the control of the Mushīr-i-tamīrāt, who has a seat on the council. The principal works that have been carried out by the department are the palace at Ahmadpur, and the palace at Bahāwalpur, each of which cost 7 lakhs. A new palace at Bahāwalpur is in course of construction, on which nearly a lakh had been spent up to the end of March, 1904. The total expenditure on public works in 1903–4 was 2 lakhs.

In 1888 the State organized a force of cavalry (two troops) and 450 infantry as Imperial Service troops; but in 1900 this force was disbanded, and an Imperial Service Silladār Camel Transport Corps raised instead. This consists of 355 men and 1,144 camels. There is

also an Imperial Service (Camel) Mounted Rifle Company, with 169 officers, non-commissioned officers, and men. The State further maintains the Nizām Infantry Regiment (492 strong), an orderly troop (103 strong), and an Imperial Service Reserve Company of 80 men. There are 13 serviceable guns. The military expenditure is about 2 lakhs annually.

The police force in 1904–5 consisted of 539 officers and men, including 47 camel-riders and 34 trackers, under a Superintendent, controlled by the Mushīr-i-āla. A training school was opened at Bahāwalpur in 1904. Each *tahsīl* is divided into several police circles (*thānas*), under a deputy-inspector. There are in all 30 circles, with 15 outposts. The expenditure on police in 1903–4 was Rs. 56,000. Village watchmen number 873. There is a central jail at Bahāwalpur town in charge of a Superintendent, who is under the Mushīr-i-āla. It contains 17 wards, with accommodation for 2,000 prisoners. Female prisoners are kept in a separate ward, and life-prisoners in separate cells. The jail manufactures include *darīs*, carpets, blankets, and paper.

Bahāwalpur stands thirty-first among the Districts and States of the Punjab in regard to the literacy of the population, of whom 2·8 per cent. (5·1 males and 0·1 females) could read and write in 1901. Higher education is confined to Bahāwalpur, the capital. The State contains a college, called the Sādik Egerton College, and a high school, both at Bahāwalpur, 7 Anglo-vernacular middle schools, 32 primary schools, and 6 Muhammadan theological schools. There is also a Church Mission school at Bahāwalpur, to which the Nawāb gives a grant-in-aid. Public schools are supervised by an Inspector. The total expenditure on education in 1903–4 was Rs. 33,000.

Medical.

The State possesses two hospitals at Bahāwalpur town, and six outlying dispensaries. The two hospitals contain accommodation for 36 in-patients. In 1904 the number of cases treated was 27,232, of whom 403 were in-patients, and 3,591 operations were performed. The expenditure of the Medical department (including vaccination) in the same year was Rs. 29,000. The department is in charge of the State Medical officer. The number of successful vaccinations in 1903–4 amounted to 21·9 per 1,000 of the population.

A revenue survey of the entire inhabited area of the State was made in 1869–74. The maps were revised in 1880, and are now again under revision, those for the Khānpur and Bahāwalpur *nizāmats* having been completed in 1904. A 4-inch survey of the riverain tracts and a 2-inch survey of the desert portion were carried out in 1869–74, the result being published on the 1-inch scale in 1876.

[*State Gazetteer* (in press); Shahāmat Alī, *History of Bahāwalpur* (1848).]

Bahāwalpur Tahsīl.—Head-quarters *tahsīl* of the State and *nizāmat* of Bahāwalpur, Punjab, lying south of the Sutlej, between 27° 52′ and 29° 33′ N. and 71° 19′ and 72° 36′ E., with an area of 3,617 square miles. The population in 1901 was 91,954, compared with 90,031 in 1891. It contains the town of BAHĀWALPUR (population, 18,546), its head-quarters and the capital of the State; and 107 villages. The *tahsīl* is traversed by the Hakra depression, south of which lies the desert. The north lies in the Sutlej riverain, and between this and the Hakra are the central uplands. The land revenue and cesses amounted in 1905-6 to one lakh.

Bahāwalpur Town.—Capital of the Bahāwalpur State, Punjab, and head-quarters of the Bahāwalpur *nizāmat* and *tahsīl*, situated in 29° 24′ N. and 71° 47′ E., on the North-Western Railway, on the south bank of the Indus, 65 miles south of Multān. Population (1901), 18,546. Founded in 1748 by Nawāb Bahāwal Khān I, it replaced Derāwar as the capital of the State. The town is surrounded by a mud wall 4 miles in circuit. The palace built by Nawāb Sādik Muhammad Khān IV in 1882 is a vast square pile, with towers at each corner. The reception hall in the centre is 60 feet long and 56 high, the vestibule being 120 feet high. The palace contains underground apartments, where the thermometer remains at about 70°, while it rises to 100° and even 110° in the upper rooms. From the roof an extensive view is gained over the vast desert of Bīkaner, which stretches away waterless for 100 miles. Five miles from Bahāwalpur, the North-Western Railway crosses the Sutlej by the magnificent iron-girder Empress Bridge, opened in 1878, 4,258 feet in length, consisting of 16 spans, each 250 feet long. The guesthouse or Nūr Mahal, built in 1875 at a cost of 12 lakhs, is a handsome building in the Italian style. The town possesses the Sādik Egerton College, the high school of the same name, an Anglo-vernacular middle school, a theological school, an orphanage, and two hospitals, one of which is the Jubilee Hospital for females, opened in 1898. It has a considerable trade and some flourishing industries, and contains a rice-husking mill, to which is attached a cotton-ginning factory. The municipality was constituted in 1874. In 1903-4 the income was Rs. 32,500, chiefly from octroi. The cantonment contains the lines of the Nizām regiment and the Imperial Service Camel Corps.

Baherī.—Northern *tahsīl* of Bareilly District, United Provinces, comprising the *parganas* of Sirsāwān, Kābar, Chaumahla, and Richhā, and lying between 28° 35′ and 28° 54′ N. and 79° 16′ and 79° 41′ E., with an area of 345 square miles. Population fell from 207,063 in 1891 to 193,412 in 1901. There are 410 villages and two small towns, neither of which has a population of 5,000. The demand for land revenue in 1903-4 was Rs. 3,64,000, and for cesses Rs. 61,000. The

density of population, 561 persons per square mile, is considerably below the District average. This *tahsīl* was the only one which decreased in population between 1891 and 1901. It is a level plain, intersected by numerous small rivers which have nearly all been dammed to supply an extensive system of canals. It is damp and malarious, especially towards the north, and population is liable to fluctuate considerably with the variations in rainfall. This is the chief rice tract in the District, and sugar-cane is less grown than in the areas farther south. The latter crop is also inferior, and its place is taken by maize in the higher lands. In 1903-4 the area under cultivation was 258 square miles, of which 44 were irrigated, almost entirely from canals.

Bahlolpur (*Bhilolpur*).—Village in the Samrāla *tahsīl*, Ludhiāna District, Punjab, situated in 30° 55′ N. and 76° 22′ E. Population (1901), 2,194. It was founded in the reign of the emperor Akbar by two Afghāns, Bahlol Khān and Bahādur Khān, whose descendants still live here. It is now of no importance. Three tombs, said to date from the time of Akbar, stand on the west side of the village.

Bahraich District.—North-western District of the Fyzābād Division, United Provinces, lying between 27° 4′ and 28° 24′ N. and 81° 3′ and 82° 13′ E., with an area of 2,647 square miles. The shape of the District is that of an isosceles triangle, with its apex pointing north-west, and its base running from south-west to north-east. It is bounded on the west by the Kauriāla or Gogra, which separates it from the Districts of Kherī, Sītāpur, and Bāra Bankī; on the north-east by Nepāl territory; and on the south-east by Gondā. The physical features are well marked by the courses of the Gogra and Rāptī. A belt of comparatively high land of a uniform breadth of 12 or 13 miles, and a total area of about 670 square miles, runs through the District in a south-easterly direction, dividing the basins of the two rivers. The great plain of the Gogra stretches away from the western edge of this strip of upland to the river itself. Tradition asserts, and the appearance of the country supports the theory, that in past ages the Gogra flowed immediately under this high bank. The plain is scored with numerous channels having a course generally parallel to that of the great river. The Gogra, or Kauriāla as it is called in its upper reaches, enters Bahraich from Nepāl on its extreme north-west corner. After a course of a few miles it is joined by the Girwā, which itself is merely a branch of the Kauriāla, leaving the parent stream in Nepāl. The only other tributary of importance is the Sarjū, a river also rising in Nepāl, which joins the Kauriāla at Katai Ghāt. An old channel, likewise called the Sarjū or Suhelī, passes below the edge of the upland into Gondā. It is said that this formerly carried the main stream, but a European timber

Physical aspects.

merchant diverted it to secure a more expeditious route for floating timber. The Rāptī crosses the north-east corner of the District, its principal tributary being known at first as the Bhaklā, and later as the Singhiā. A small stream, named the Tirhī, rises a short distance from Bahraich town and flows into Gondā. There are numerous lakes and *jhīls*, the largest being the Bāghel Tāl near Payāgpur. Many of them have been formed by the old beds of rivers.

The whole District is composed of alluvium, and even *kankar* or calcareous limestone is rare.

The flora is that of the sub-Himālayan area. At annexation most of the District, excluding the river valleys, was jungle, and considerable areas are still occupied by low forest growths. Along the Nepāl border lie large stretches of 'reserved' forests, which will be described later. The rest of the District is also well wooded, groves of mangoes and *mahuā* (*Bassia latifolia*) having been planted largely, and *shīsham* (*Dalbergia Sissoo*) to a smaller extent.

Owing to the large area of forests and jungle, the District presents a varied fauna. Tigers, leopards, bears, wolves, hyenas, wild hog, *sāmbar*, spotted deer, swamp deer, hog deer, barking-deer, antelope, and *nīlgai* are all found. In some places cattle have run wild and do much damage to the crops. Game-birds of the usual kinds are common, and fish abound in the rivers and tanks.

The climate is moist, and cooler than that of the Districts south of the Gogra; the cold season lasts long and the prevailing winds are easterly. The District is, however, malarious, especially after the close of the rains.

The annual rainfall averages 45 inches, the north receiving a slightly larger amount than the south. Variations are large: in 1870 the fall was 79 inches, and in 1864 only 24 inches.

History.

Legend connects the name of the District with Brahmā, who is said to have chosen this area as his own special kingdom. Other traditions include it in the realm of Rājā Karna, who is referred to in the Mahābhārata. At the dawn of history the tract formed part of the kingdom of Northern KOSALA, with its capital at Srāvastī. The identification of the site of this great city, at which Gautama Buddha spent several years of his life, is still a disputed question. Some writers place it at SET MAHET on the borders of Bahraich and Gondā, while others believe that it lies on the Rāptī in Nepāl. In the fifth and seventh centuries the country round Srāvastī was found by the Chinese pilgrims to be waste and desolate. Later traditions state that Bahraich was held by the Bhars, whose name it bears. The half-mythical raid of Sālār Masūd, the Muhammadan warrior saint, ended in battle with the chiefs of the neighbourhood near Bahraich town in 1033. It was not, however, till the thirteenth

century that a regular Muhammadan government was established in the trans-Gogra region. One of the earliest governors was Nāsir-ud-dīn Mahmūd, son of Altamsh, who ruled here rigorously until he succeeded to the throne of Delhi in 1246. For the best part of a century the records of Bahraich contain nothing of note. The Ansārīs, the descendants of the early Musalmān settlers and invaders, gradually extended their hold over the south of the District; but the Bhars were not crushed till later. In 1340 Muhammad bin Tughlak visited the tomb of Saiyid Sālār, and made the first of a series of grants, from which sprang several of the great *talukdāri* estates. This grant was in favour of the Saiyids, who expelled the Bhars and acquired a large estate. Fīroz Shāh Tughlak passed through the District and left a young Janwār Rājput, named Bariār Sāh, to clear the country of banditti. Bariār Sāh resided at Ikaunā, and his clan has provided owners for several estates in both Bahraich and Gondā. About forty years later the Raikwārs established themselves in the west. Under Akbar the District, together with parts of Gondā and Kherī, formed the Bahraich *sarkār*. The Muhammadan rule was, however, never thoroughly effective till the appointment of Saādat Khān to the governorship of Oudh. The great Rājās fought with each other or with the governor of Bahraich, and paid as little revenue as they could. All, however, had to yield to the new power, and for many years they were kept in check. Saādat Alī Khān, the sixth Nawāb, first introduced a system of farming the revenue, under which the local governors paid a fixed amount, and appropriated surplus collections. The system worked well as long as it was adequately supervised, and the *nāzims* or governors of Bahraich were at first able and considerate. Deterioration then set in, and oppression rose to its height under Raghubar Dayāl, who held the contract for 1846–7. The state of desolation to which the country was reduced is graphically described by Sir W. Sleeman, who passed through the District in 1849. The annexation of Oudh in 1856 put an end to this misrule and misery, though the work of organization was delayed by the Mutiny. The troops at Bahraich rebelled; and the officers, after an attempt to reach the hills, made for Lucknow, but were murdered on the Gogra. The *talukdārs* had lost little by the land policy adopted at annexation, compared with those of other Districts; but on the outbreak of the Mutiny, the majority joined the mutineers. Troops were not sent into the District till December, 1858, when the rebels fled to Nepāl after a short campaign. Large estates were confiscated, and part of the District was restored to Nepāl, from which it had been taken in 1816.

A number of ancient sites still await exploration; relics of the Buddhist period have been discovered in places. The celebrated shrine of Saiyid Sālār is situated about two miles north of BAHRAICH

TOWN. An old town, called Dogaon, was an important centre of trade in the Mughal period [1].

The District contains 3 towns and 1,881 villages. Population is increasing. The numbers at the last four enumerations were as follows: (1869) 775,915, (1881) 878,048, (1891) 1,000,432, and (1901) 1,051,347. There are three *tahsils*—BAHRAICH, KAISARGANJ, and NĀNPĀRA—each named from its headquarters. The principal towns are the municipalities of BAHRAICH, the District capital, and NĀNPĀRA, and the 'notified area' of BHINGĀ. The following table gives the chief statistics of population in 1901:—

Population.

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Bahraich . .	918	2	688	377,588	411	+ 5·7	18,426
Kaisarganj .	679	...	647	348,172	513	+ 4·5	7,933
Nānpāra . .	1,050	1	546	325,587	310	+ 4·6	6,620
District total	2,647	3	1,881	1,051,347	397	+ 5·1	32,979

Hindus form more than 81 per cent. of the total, and Musalmāns more than 18 per cent. The density of population is much below the average for Oudh, but the increase during the last decade was considerable. Almost the whole population speaks the Awadhī dialect of Eastern Hindī.

The most numerous Hindu caste is that of Ahīrs (graziers and cultivators), who number 125,000. Other castes largely represented are Kurmīs (agriculturists), 95,000; Brāhmans, 92,000; Chamārs (tanners and cultivators), 76,000; Korīs (weavers), 51,000; Pāsīs (toddy-drawers and cultivators), 48,000; Lodhas (cultivators), 43,000; Muraos (market-gardeners), 26,000; and Rājputs, 25,000. Thārus, a tribe confined to the submontane swamps, are found in small numbers in the north of the District. The Muhammadans are chiefly Pathāns, 33,000; Julāhās (weavers), 21,000; Behnās (cotton-carders), 14,000; and Nais (barbers), 11,000. Agriculture supports 70 per cent. of the total population, and general labour 5 per cent. Kurmīs occupy more than one-sixth of the area held by tenants, and Brahmāns, Rājputs, and Ahīrs also cultivate large areas.

Of the 173 native Christians enumerated in 1901, 148 were Methodists. The American Methodist Mission began work here in 1865, and has several branches in the District.

The soil of Bahraich is chiefly loam and clay. North of the Rāptī, and at one or two other places near the Nepāl frontier, a moist *tarai*

[1] W. Vost, *Journal, Asiatic Society of Bengal*, vol. lxiv, p. 69.

tract occurs, which is especially favourable for the valuable late rice, but produces little else. The central plateau yields excellent wheat. The inferior early rice, followed by wheat or other spring crops, is grown in this tract, while late rice is grown in small depressions. The basins of the Rāptī and Gogra are more distinctly alluvial, and are very fertile except where the layer of rich silt above the sandy subsoil is thin. The larger rivers constantly flood their banks, but the Sarjū and Rāptī generally deposit good silt, while the Gogra causes damage by bringing down sand.

Agriculture.

The tenures are those usually found in OUDH. About 78 per cent. of the total area, excluding the forests, is held by *talukdārs*, and more than half is included in four large estates. A very small proportion is occupied by sub-settlement holders and under-proprietors. The main agricultural statistics for 1903-4 are given below, in square miles:—

Tahsil.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Bahraich . .	918	591	105	124
Kaisarganj . .	679	443	13	123
Nānpāra . .	1,050	524	20	181
Total	2,647	1,558	138	428

Wheat, maize, and rice are the crops most largely grown, and in 1903-4 covered 459, 447, and 422 square miles respectively, or from 29 to 27 per cent. of the net area cultivated. Gram (273 square miles), barley (156), and peas and *masūr* (59) are the remaining food-crops of importance. Poppy covered 15 square miles and oilseeds 189.

There has been a very large increase in the cultivated area since the first regular settlement, amounting to 25 per cent. This is due both to the recovery of the District from the effects of misgovernment, and also to the clearing of jungle. No conspicuous changes in methods have taken place; but double cropping is more extensively practised, and the area under rice, wheat, and poppy is increasing rapidly. Population is still comparatively thin, and a large area is held by Brāhmans and Rājputs, who are inferior cultivators. Very few advances are taken under the Land Improvement and Agriculturists' Loans Acts. Out of a total of Rs. 11,600 lent during the ten years ending 1900, the single year 1896-7 accounted for Rs. 9,000. In four years since 1900 the loans averaged less than Rs. 2,000.

In the south of the District the cattle are of the ordinary inferior type, but towards the north they improve, and two good breeds are locally recognized, known as the Nānpāra and the Risiā. Though small, these cattle are active and hardy, and well fitted for agricultural work. The

ponies are also of poor quality, but better animals are imported from Nepāl. Sheep and goats are kept in very large numbers and are used for penning on the land.

Irrigation is required to a comparatively small extent. Tanks and *jhīls* are the most important source, supplying 100 square miles in 1903–4, while wells irrigated 29, and other sources 9 square miles. In the river basins there is very little irrigation, as the soil retains sufficient moisture except for garden crops. Masonry wells are rarely used for irrigation. Small streams are dammed to supply water, especially the hill streams in the north-east. Water is raised from *jhīls* by the swing-basket and from wells by the lever.

Bahraich includes an area of 334 square miles of 'reserved' forests in charge of a Deputy-Conservator. They are situated chiefly along the Nepāl frontier, but also extend some distance south of the boundary. The chief timber tree is the *sāl* (*Shorea robusta*); but many other species are found, including the *tūn* (*Cedrela Toona*), *mahuā*, *haldu* (*Adina cordifolia*), *asna* (*Terminalia tomentosa*), *dhau* (*Anogeissus latifolia*), &c. In the low-lying alluvial land *shīsham* (*Dalbergia Sissoo*) and *khair* (*Acacia Catechu*) are common. The receipts on account of forest produce in 1903–4 amounted to 1·5 lakhs, the chief item being timber (1·2 lakhs).

A little *kankar* is extracted in places and is used for making lime, but lime is also largely imported.

Coarse cotton cloth is made in many villages for local consumption. The only industry known outside the District is that of felt-making. Small rugs of felted wool are made and ornamented with patterns. Blankets are made at a few places, and excellent wood-carving was formerly produced.

Trade and communications.

The trade of the District has grown up since the commencement of British rule. The chief exports are grain, forest produce, oilseeds, and opium, while piece-goods, metals, salt, and sugar are imported. Timber is floated down the river, but the railway carries most of the trade. The chief markets are thus situated on the line of rail at Bahraich, Nānpāra, Payāgpur, and other smaller places. Gram, oilseeds, and spices from Nepāl are largely carried by a branch of the railway which terminates on the frontier close to Nepālganj, and piece-goods, metals, salt, tobacco, and sugar enter Nepāl from the same place. There are also other routes, and the total traffic with Nepāl is valued at 25 to 30 lakhs a year.

The main line of the Bengal and North-Western Railway crosses the extreme southern corner of the District, while a branch from Gondā traverses it from end to end. The latter terminates at Katārniān Ghāt on the Girwā, with a branch from Nānpāra to Nepālganj Road on the frontier. Road communications are poor. There are 619 miles of roads, but only 14 miles are metalled, owing to the difficulty and expense of

obtaining stone. The whole cost is charged to Local funds. Avenues of trees are maintained on 133 miles.

Famine.

An extensive failure of the crops owing to drought is unknown in Bahraich, and damage from excess is more common than loss from deficiency of rain. The principal effects of an exceptionally dry season are to injure the late rice, and curtail the sowings of a second crop after maize or early rice. Prices rise when there is famine elsewhere, and the labouring classes suffer. Thus in 1877 relief works and poorhouses were opened. In 1896–7, however, no relief was required.

Administration.

The Deputy-Commissioner is usually assisted by three Deputy-Collectors recruited in India. An officer of the Opium department is stationed in the District, and a *tahsīldār* at the headquarters of each *tahsīl*.

Two District Munsifs and a Subordinate Judge comprise the ordinary civil courts of the District, which is included in the Civil and Sessions Judgeship of Gondā. Criminal work is usually light; but outbreaks of dacoity occur, and breaches of the peace are common. Although Bahraich has large grazing-grounds there are no professional cattle thieves.

The records of the summary settlement made in 1856 perished in the Mutiny. On the restoration of order a second summary settlement was made, the revenue demand amounting to 5·8 lakhs. In 1865 a survey commenced, which was followed by a regular settlement completed in 1872. In the greater part of the District the soil was divided into classes, and rent rates were selected from those actually paid, which were applied to the area in each class. The 'assets' of the grain-rented land were estimated by ascertaining the average annual value of the crops in each class of soil. The revenue demand was raised to 9·6 lakhs. This settlement was revised between 1896 and 1899, when regard was had to the different rates paid by high-caste and low-caste tenants. Where rents were paid in cash, the recorded rents were used as the basis of assessment. Nearly half of the area included in the holdings of tenants is, however, held on grain-rents, and rates were estimated for this land on the basis of the actual receipts recorded in the village papers. The result was an enhancement to 12·8 lakhs, of which 1·7 lakhs represented the revenue on permanently settled estates. The revenue of the temporarily settled portion of the District amounted to 45 per cent. of the corrected net 'assets,' excluding forests. The incidence is R. 0·9 per acre, varying in different *parganas* from R. 0·3 to Rs. 1·5. Collections on account of land revenue and revenue from all sources are shown in the table on next page, in thousands of rupees.

The District contains two municipalities, BAHRAICH and NĀNPĀRA, and one 'notified area,' BHINGĀ. Outside these towns, local affairs are

managed by the District board, which in 1903–4 had an income of 1·2 lakhs, of which half was derived from rates. The expenditure was 1 lakh, including Rs. 40,000 spent on roads and buildings.

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	9,77	9,04	11,53	12,07
Total revenue . .	11,81	12,18	16,24	17,40

There are 12 police stations; and the District Superintendent of police has under him a force of 3 inspectors, 74 subordinate officers, and 293 constables, besides 71 municipal and 2,153 rural police. The District jail contained a daily average of 250 prisoners in 1903.

The District takes a medium place as regards the literacy of its population, of whom 3·1 per cent. (6·5 males and 0·1 females) could read and write in 1901. The number of public schools increased from 94 with 4,425 pupils in 1880–1 to 114 with 4,821 pupils in 1900–1. In 1903–4 there were 166 such schools with 6,694 pupils, of whom 121 were girls. Only 639 pupils had advanced beyond the primary stage. Two schools were managed by Government, and 91 by the District and municipal boards. The total expenditure on education was Rs. 30,000, of which Rs. 22,000 was derived from Local funds, and Rs. 6,000 from fees.

There are 14 hospitals and dispensaries, with accommodation for 88 in-patients. In 1903 the number of cases treated was 111,000, including 877 in-patients, and 4,082 operations were performed. The expenditure in the same year amounted to Rs. 14,000, chiefly met from Local funds.

About 34,000 persons were successfully vaccinated in 1903–4, representing a proportion of 31 per 1,000 of population. Vaccination is compulsory in the municipalities.

[P. Harrison, *Settlement Report* (1901); H. R. Nevill, *District Gazetteer* (1903).]

Bahraich Tahsīl.—Eastern *tahsīl* of Bahraich District, United Provinces, comprising the *parganas* of Bahraich, Ikaunā, Bhingā, and Tulsīpur, and lying between 27° 16′ and 27° 56′ N. and 81° 27′ and 82° 13′ E., with an area of 918 square miles. Population increased from 356,958 in 1891 to 377,588 in 1901. There are 688 villages and two towns: BAHRAICH (population, 27,304), the District and *tahsīl* headquarters, and BHINGĀ (5,972). The demand for land revenue in 1903–4 was Rs. 5,04,000, and for cesses Rs. 82,000. The density of population, 411 persons per square mile, is slightly above the District average. Two large areas in the north are occupied by 'reserved' forests. A tract of *tarai* or damp rice land in the north, between the forests, is crossed by several streams running into the Rāptī. The valleys of this large river, and of its tributary the Singhiā, occupy the central part of

the *tahsīl*, and on the south lies the upland plateau, drained by the Tirhī. In 1903-4 the area under cultivation was 591 square miles, of which 105 were irrigated. Tanks or *jhīls* are the chief source of supply, but wells are more used than in other parts of the District.

Bahraich Town.—Head-quarters of Bahraich District and *tahsīl*, United Provinces, situated in 27° 34′ N. and 81° 36′ E., on the Bengal and North-Western Railway. Population (1901), 27,304. The principal building of interest is the shrine of Saiyid Sālār Masūd, a famous warrior and saint, who invaded Oudh about 1033, and, after several victories, was defeated and slain by the confederate Hindu chiefs. The tomb is a domed building erected two centuries after the saint's death, and it occupies the site of a former temple of the Sun. Fīroz Shāh Tughlak added a wall and other buildings. A large fair, attended by about 100,000 persons, both Hindus and Muhammadans, takes place annually in May, when large offerings are collected. The shrine is now managed by a committee under the supervision of the Deputy-Commissioner. The town stands at the edge of a plateau on undulating ground, and is well drained. It contains a municipal hall and male and female dispensaries, besides a dispensary near the tomb, and is the head-quarters of the American Methodist Mission in the District. Bahraich has been administered as a municipality since 1869. During the ten years ending 1901 the income and expenditure averaged Rs. 26,000 and Rs. 25,000 respectively. In 1903-4 the income was Rs. 32,000, chiefly derived from octroi (Rs. 23,000); and the expenditure was Rs. 34,000. The trade of the town has increased considerably since the opening of the railway, and a large traffic with Nepāl passes through it. Grain, sugar, timber, and tobacco are the chief articles dealt in, and there is a small manufacture of felt. There are 11 schools with 900 pupils.

Bahrāmghāt.—Village in the Fatehpur *tahsīl* of Bāra Bankī District, United Provinces, situated in 27° 7′ N. and 81° 27′ E., on the right bank of the Gogra at its junction with the Chaukā, on the broad-gauge line of the Oudh and Rohilkhand Railway, and on a road from Lucknow to Gonda. Population (1901), 2,838. The place was formerly of commercial importance as the point at which traffic crossed the Gogra; and a bridge of boats, replaced during the rains by a ferry, is still maintained. The construction of the Elgin railway bridge a mile away has reduced the trade passing through it, but there is still a large traffic in timber and grain from Nepāl and the Districts north of the Gogra. Timber is sawn here, and there is a small manufacture of furniture. A factory owned by a European turns out and repairs iron sugar-mills.

Bahrampur.—Subdivision and town of Murshidābād District, Bengal. *See* BERHAMPORE.

Baidyabāti.—Town in the Serampore subdivision of Hooghly District, Bengal, situated in 22° 47′ N. and 88° 20′ E., on the right bank of the Hooghly river. Population (1901), 17,174. The town is an important trade centre, and Seorāphulī, a southern suburb, is a thriving market for jute and potatoes. A jute-mill at Chāmpdāni east of the town gives employment to 3,000 hands. Rope made of jute and hemp is manufactured within the town. Baidyabāti was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 20,000, and the expenditure Rs. 18,000. In 1903–4 the income was Rs. 25,200, of which Rs. 8,000 was derived from a tax on persons, and Rs. 5,000 from a conservancy rate; and the expenditure was Rs. 22,000.

Baidyanāth.—Site of temples in the Santāl Parganas District, Bengal. *See* DEOGARH.

Baigā[1].—A primitive Dravidian tribe in the Central Provinces, with 25,000 members in 1901, residing principally in Mandlā and the adjoining Districts. The Binjhāls or Binjhwārs, who number 71,000, and are found chiefly in Sambalpur, were originally a subdivision of the Baigās, but have now become Hinduized, and are practically a separate caste. In Mandlā and Bālāghāt the Binjhāls are shown as a sub-caste of Baigās. They include several of the Sambalpur *zamīndārs*. The Bhumiās ('guardians of the earth') are the same tribe as the Baigās, while the Bhainās of Bilāspur are probably another offshoot, Raibhainā being shown as a sub-caste of Baigā in Bālāghāt.

The Baigās have several endogamous divisions, some of which will not eat with each other. The Gondwaināis who eat beef and monkeys are the lowest sub-caste. Each sub-caste is divided into a number of exogamous septs, the names of which are identical in many cases with those of the Gonds. The septs are further divided, as among the Gonds, into groups worshipping different numbers of gods, and the marriage of persons worshipping the same number of gods is prohibited, although they may belong to different septs. This organization is probably taken from that of the Gonds, adopted in accordance with the usual principle of imitation at the time when the Gonds were a ruling race. Gond girls marrying Baigās are admitted into the caste.

Marriage is adult, and a price varying from Rs. 5 to Rs. 20 is usually paid for the bride. Unchastity before marriage is said to be a rare occurrence. The ceremony presents no special features, except that it is considered essential that the bride's father should go out to meet the bridegroom's party riding on an elephant. As a real elephant is not within the means of a Baigā, two wooden bedsteads are lashed together and covered with blankets, with a black cloth trunk in front, and this

[1] The greater part of this article is taken from a monograph furnished by the Rev. J. Lampard, missionary, Baihar.

arrangement passes muster for an elephant. A widow is expected to marry her husband's younger brother, and if she marries anybody else without his consent, he must be compensated by a payment of Rs. 5. Divorce is effected by the husband and wife jointly breaking a straw.

The dead are usually buried, old persons alone being burnt as a special honour, and to save them from the risk of being devoured by wild animals. The bodies are laid naked in the grave with their heads pointing to the south. In the grave of a man of importance two or three rupees and some tobacco are placed. Over the grave a platform is made on which a stone is erected. This is called the *bhīri* of the deceased, and is worshipped by his relations in time of trouble.

Their religion presents no special features; but a Baigā is frequently the priest in a Gond village, probably because as an earlier resident of the country he is considered to have a more intimate knowledge of the local deities and is therefore called in to lay spirits. Even a Brāhman has been known to consult a Baigā priest and ask what forest gods he should worship, and what other steps he should take to keep well and escape calamity. The knowledge which the Baigās possess of the medicinal properties of jungle roots and herbs enables them to sustain their reputation among the other tribes as medicine men.

The Baigās are the wildest of all the forest tribes, and formerly practised only shifting cultivation, by burning down patches of jungle and sowing seed on the ground fertilized by the ashes after the breaking of the rains. Now that this practice has been prohibited in Government forests, attempts have been made to train them to regular cultivation, but with indifferent success in Bālāghāt. One explanation of their refusal to cultivate is that they consider it a sin to lacerate the breast of their mother earth with a plough-share. They also say that God caused the jungle to produce everything necessary for the sustenance of man and made the Baigās kings of the forest, giving them wisdom to discover the things provided for them. To Gonds and others who had not this wisdom the inferior occupation of tilling the land was left. Men never become farm-servants, but during the cultivating season they work for hire at uprooting the rice seedlings for transplantation; they do no other agricultural labour for others. Women do the actual transplantation of rice, and work as harvesters. The men make bamboo mats and baskets, which they sell in the weekly village markets; they also collect and sell honey and other forest products, and are most expert at all work that can be done with an axe, making excellent wood-cutters. But they show no aptitude in acquiring the use of any other implement and dislike continuous labour, preferring to do a few days' work and then rest in their homes for a like period before beginning again. They hunt all kinds of wild animals with spears, poisoned arrows, and axes,

with a single blow of which they will often kill a leopard or other large animal. Their active and wiry frames, great powers of endurance, sharp eyes and ears, and supple limbs make them expert trackers of wild animals. They are also very clever at setting traps and snares, and catch fish by damming streams in the hot season, and, it is said, throwing into the pool thus formed some leaf or root which causes the fish to become partially stupefied and enables them to be caught easily with the hand. They never live in a village with other castes, but have their huts some distance away in the jungle. While nominally belonging to the village near which they dwell, so separate and distinct are they from the rest of the people that in the famine of 1897 cases were found of Baigās starving in hamlets only a few hundred yards from the village proper in which ample relief was being given. In character they are simple, honest, and truthful, and when their fear of a stranger has been dissipated are most companionable folk. The Baigās have no separate language of their own, but speak a broken Hindī.

Baihar (*Behir*).—Northern *tahsīl* of Bālāghāt District, Central Provinces, lying between 21° 32′ and 22° 24′ N. and 80° 2′ and 80° 3′ E. In 1901 its area was 1,452 square miles, and its population 76,911 persons. In 1904 a redistribution of territory between the Bālāghāt and Baihar *tahsīls* took place, and also a small interchange of area between the Baihar *tahsīl* and Mandlā District. The adjusted figures of area and population are 1,774 square miles and 86,230 persons. The population in 1891 of the area now constituting the *tahsīl* was 91,860. The density is 49 persons per square mile. The *tahsīl* contains 493 inhabited villages. The head-quarters are at Baihar, a village of 1,298 inhabitants, 41 miles from Bālāghāt town by road. Excluding 664 square miles of Government forest, 26 per cent. of the available area is occupied for cultivation. The demand for land revenue on the present area in 1903–4 was Rs. 34,000, and for cesses Rs. 4,000. The *tahsīl* consists of a series of elevated plateaux, divided and surrounded by hills, and covered for the most part with forest. Large areas of waste land are fit for cultivation, and their colonization on the *ryotwāri* system is in progress. The *tahsīl* includes one whole *zamīndāri* estate and parts of three others, with a total *zamīndāri* area of 484 square miles, of which 132 are forest.

Baijnāth.—Site of temples in the Santāl Parganas District. *See* DEOGARH.

Baijnāth (the ancient Kīragrāma).—Village in Kāngra District, Punjab, situated in 32° 2′ N. and 76° 43′ E., 11 miles east of Pālampur. Population (1901), 6,555. Two Hindu temples here bear inscriptions in the ancient Sārada character, which give the pedigree of the Rājānakas or princes of Kīragrāma, who were kinsmen and feudatories of the kings of Jālandhara or Trigartta. The date of the inscriptions is

disputed. Formerly attributed to the early part of the ninth century, they are assigned by a recent investigator to a period three or four centuries later. One of these temples was seriously damaged by the earthquake of April 4, 1905.

[*Epigraphia Indica*, vol. i, pp. 97–119; *Journal, Royal Asiatic Society* (1903), p. 16, note.]

Baijnāth.—Village in the District and *tahsīl* of Almorā, United Provinces, situated in 29° 55′ N. and 79° 37′ E., on a cart-road from Kāthgodām. Population (1900), 148. Baijnāth lies in the centre of the Katyūr valley, and was formerly known as Kārttikeyapura, a capital of the Katyūri Rājās. On a neighbouring hill stands an old temple, sacred to Kālī, at which kids and buffalo calves are sacrificed to the goddess, especially at the Dasahra. Other old temples are to be seen in the valley, and some copperplates are preserved; inscriptions found here yield a series of dates from A.D. 1202. The valley now contains several tea plantations. A dispensary is maintained at Baijnāth.

Baikal.—Village in South Kanara District, Madras. *See* BEKAL.

Bairagniā.—Village in the Sītāmarhī subdivision of Muzaffarpur District, Bengal, situated in 26° 44′ N. and 85° 20′ E., on the east bank of the Lal Bakyā river, on the Nepāl frontier. Population (1901), 2,405. Bairagniā, which is the terminus of a branch of the Bengal and North-Western Railway, is a large grain and oilseed dépôt of growing importance, where the dealers of the plains meet the hillmen and the Nepāl trade changes hands.

Bairāt (*Vairāta*).—Head-quarters of the *tahsīl* of the same name in the Torāwati *nizāmat* of the State of Jaipur, Rājputāna, situated in 27° 27′ N. and 76° 12′ E., about 42 miles north-by-north-east of Jaipur city. Population (1901), 5,637. The place contains a vernacular middle school attended by 138 boys, and an elementary indigenous school. Bairāt is of very great antiquity, two inscriptions of the time of Asoka (250 B.C.) having been found within a mile of the town, besides copper coins believed to be of an even earlier date. It has been identified as the capital of the old province of Matsya, celebrated in Hindu legends as the abode of the five Pāndavas during their exile of twelve years from Delhi. The earliest historical notice of the place is that of the Chinese pilgrim, Hiuen Tsiang, in A.D. 634; he mentions the existence of eight Buddhist monasteries, but found them much ruined and the number of monks small. In the beginning of the eleventh century Mahmūd of Ghazni invaded the country and sacked the town, which is said to have remained more or less deserted for about 500 years; but it was certainly in existence in Akbar's time, as it is mentioned in the *Ain-i-Akbarī* as possessing very profitable copper-mines. The latter have not been worked for many years.

[*Archaeological Survey of Northern India*, vols. ii and vi.]

Bairiā.—Town in the District of Balliā, United Provinces, situated in 25° 46′ N. and 84° 29′ E., 20 miles east of Balliā town, on the road to Chāpra in Bengal. Population (1901), 8,635. The town is little more than a conglomeration of mud-built houses, traversed from east to west by one good street. It is administered under Act XX of 1856, with an income of about Rs. 1,100. There is a considerable export trade in sugar and coarse cotton cloth, which are manufactured here, and the shoes made locally have some reputation in the surrounding Districts. Bairiā contains a dispensary and a town school with 116 pupils.

Baiswārā.—The name given to several tracts of country in various parts of the United Provinces, from the fact that they belong or have belonged to the Bais Rājputs. The most important of these includes a number of *parganas* (traditionally twenty-two) in the eastern half of Unao District, the western half of Rāe Barelī, and the extreme south of Lucknow, with a total area of nearly 2,000 square miles. The Bais Rājputs first became of importance here in the thirteenth century, when two of them, named Abhai Chand and Nirbhe Chand (who are supposed to have come from Mungī Pātan in the Deccan), rescued the Gautam Rānī of Argal, who had been attacked by the Muhammadan governor of Oudh. Nirbhe Chand died of his wounds, and the Rājā of Argal gave his daughter to Abhai Chand, who settled at Daundiā Khera. Tenth in descent from him was Tilok Chand, who lived about 1400, and extended the area held by the Bais to the limits described above. Legends are numerous about Tilok Chand, who became the greatest noble in Oudh, and opposed the Muhammadans, as did his immediate successors. According to one account, he defeated the Chauhān Rājā of Mainpurī, who thereupon gave him a daughter to wife, though the Bais were reckoned inferior to the Chauhāns. In the eighteenth century the bravery of the chiefs of Baiswārā gained the admiration of Saādat Khān, founder of the Lucknow dynasty. Under the Nawābs Baiswārā formed a separate administrative division, as described above. The Baiswārā Division formed by the British Government after annexation consisted of Rāe Barelī, Partābgarh, and Sultānpur, the last two Districts having nothing to do with the real Baiswārā. The tract has given its name to a dialect of Eastern Hindī, which differs very slightly from other dialects of that language. Its inhabitants still bear a reputation for bravery. It was a Bais chieftain, Drigbijai Singh, who saved the four survivors of the Cawnpore massacre from their pursuers in 1857.

[C. A. Elliott, *Chronicles of Oonao*, p. 66 et seq.]

Baitaranī.—River of Bengal. Rising among the hills in the north-west of Keonjhar State, Orissa, in 21° 28′ N. and 85° 33′ E., it flows first in a south-westerly and then in an easterly direction, forming suc-

cessively the boundary between Keonjhar and Mayūrbhanj States, between Keonjhar and the District of Cuttack, and between Cuttack and Balasore. In the latter District the Brāhmanī joins it in 20° 45′ N. and 86° 49′ E., after the Baitaranī has had a course of 224 miles, and the united stream flows, under the name of the DHĀMRA, into the Bay of Bengal. The river is navigable as high as Olokh, 15 miles from its mouth; beyond this point it is not affected by the tide, and is fordable during the hot season. This river is the Styx of Hindu mythology; and a legend has it that Rāma, when marching to Ceylon to rescue his wife Sītā from the ten-headed demon Rāvana, halted on its banks on the borders of Keonjhar. In commemoration of this event large numbers of people visit the river every January. The chief tributaries are the Sālandī and Matai in Balasore District. The principal places on the banks are Anandapur in Keonjhar State, and Olokh and CHĀNDBĀLI in Balasore District. The river is crossed by the Orissa High-level Canal, which derives from it a portion of its water-supply.

Bajāna.—State in the Kāthiāwār Political Agency, Bombay, lying between 22° 58′ and 23° 10′ N. and 71° 40′ and 71° 59′ E., with an area of 183 square miles. The population in 1901 was 10,279, residing in twenty-seven villages. The revenue in 1903-4 was Rs. 71,000, and 38 square miles were cultivated. Bajāna ranks as a fourth-class State in Kāthiāwār. The Jāts or Jats of Bajāna originally came from Vānga Bāzār in Sind, whence they were driven by one of the rulers in consequence of their refusing him a bride from their community, and were forced to seek shelter with the Ponwārs in the Māndav hills near Thān. The Jāts were employed in the siege of Chāmpāner, and there displayed such prowess that the Sultān bestowed on their leader, Malik Hedoji, the twenty-four villages subject to Bajāna. Shortly after this they conquered Mandal from the Jhālas. Malik Isāji next established himself at Vālivda and subsequently at Vārāhi, which he took from Rāvmās, while Malik Lākha and Malik Haidar Khān settled respectively in Sītāpur and Vanod and in Bajāna. Vārāhi and its neighbourhood is called Great Jatvār, and Bajāna and its neighbourhood Little Jatvār.

Bājaur.—A tract of country in the Dīr, Swāt, and Chitrāl Agency, North-West Frontier Province, lying between 34° 25′ and 35° 5′ N. and 70° 1′ and 72° E. It comprises five valleys: namely, Chahārmung, Bābūkara, Watalai (or Ut-lai), Rūd in the valley of the Rūd river, and the Sūr Kamar valley, in which lies Nawagai. In the last, the Nawagai, Chamarkand, and Suran ravines unite to form the Pipal, or Ambahār river, which falls into the Swāt some distance below its junction with the Panjkora. Bājaur is bounded on the north by the Panjkora river; on the east by the Utmān Khel and Mohmand territories, the latter also bordering it on the south; and on the west by the crest of the

eastern watershed of the Kunar river, which divides it from Afghānistān. Its population probably amounts to 100,000, and its area to nearly 5,000 square miles. Lying at a lower elevation than Dīr, Bājaur has a smaller rainfall, and the snowfall on the range in which the affluents of the Rūd take their rise is also slight. In consequence the hills are not well wooded; and though the Rūd, the most important of the five valleys, is very fertile, Bābūkara, Chahārmung, and Watalai are not so productive. The history of the tract is dealt with in the article on SWĀT.

The Rūd valley is peopled by various Pathān tribes, Tarkanri or Tarkilanri Yūsufzai, Mohmands, Sāfis, Utmān Khel, and others. Chahārmung and Bābūkara are held by the Salarzai, and Watalai by Mamunds, both sections of the Tarkanri. The political system, if it can be termed system, is a communal form of party government, subject to the control of the Khān of Nawagai, who is nominally the hereditary chief of all Bājaur. Under him the country is divided into several minor Khānates, each governed by a chieftain, usually a near relative of the Khān. But virtually the authority of the chieftains is limited to the rights to levy tithe, or *ushar*, when they can enforce its payment, and to exact military service if the tribesmen choose to render it. Public, or rather tribal, affairs are managed by the *jirga* or assembly of the party in power, and in this assembly each landowner has a vote.

Baj-Baj.—Town in the Twenty-four Parganas District, Bengal. *See* BUDGE-BUDGE.

Bājitpur.—Town in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 13′ N. and 90° 57′ E. Population (1901), 10,027. The town was formerly noted for its fine muslins, and the East India Company had a factory here. The industry has declined, but the *golābātān sārīs* of Bājitpur still command a large sale. Bājitpur was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 2,950, and the expenditure Rs. 2,800. In 1903–4 the income was Rs. 4,500, of which Rs. 2,600 was derived from a tax on persons (or property tax); and the expenditure was Rs. 3,500.

Bajranggarh.—Fort in RĀGHUGARH STATE, Central India.

Bajwāra.—Ancient town in the District and *tahsīl* of Hoshiārpur, Punjab, situated in 31° 31′ N. and 75° 57′ E., 2 miles south-east of Hoshiārpur. Population (1901), 2,653. It is said to have been founded by immigrants from Ghazni, and was once the chief town of the District, tradition relating that its walls were 18 miles in circumference. It is mentioned in the *Ain-i-Akbarī* as famous for horses. Todar Mal, Akbar's minister, is said to have broken up the town into small divisions as a punishment for the inhabitants not receiving him with proper respect. In later times it was held by Sirdār Bhūp Singh,

Faizullahpuria, who was ousted in 1801 by Rājā Sansār Chand. The latter built a fort here, which was taken by Ranjīt Singh in 1825. Since then the town has declined and its ruins have been largely used for road-metal. The fort was utilized as a military prison in the earlier years of the British administration, but was afterwards dismantled; and at the present time only two ruined bastions are in existence. The town has an Anglo-vernacular high school.

Bākarganj.—District in Eastern Bengal and Assam. *See* BACKERGUNGE.

Bakhira Tāl (also called Badānch Tāl or Motī Jhīl).—A lake on the eastern border of Bastī District, in the United Provinces. Buchanan described it as the finest piece of fresh water he had seen in India. It covers a space of about 5 miles by 2, but is merely a shallow depression filled with water, the depth of which rarely exceeds 4 or 5 feet. On the west and south the fringe of marsh is small; but on the north a tract, which is regularly flooded in the rains, extends for 3 miles. To the east a low fen stretches for about 2 miles to the edge of the Rāptī. The water in the lake is largely supplied by floods from this river, and would escape again but for an embankment along the eastern side. Fish are plentiful, and are caught in screens at the outlets of the dam or speared with a thin piece of bamboo tipped with iron. In the cold season the surface of the water is covered with wild-fowl. *Boro* or summer rice is largely planted in February or March round the edges of the lake.

Bakhtgarh.—*Thakurāt* in the BHOPĀWAR AGENCY, Central India.

Bakhtiyārpur.—Village in the Bārh subdivision of Patna District, Bengal, situated in 25° 27′ N. and 85° 32′ E., on the East Indian Railway. Population (1901), 234. It is 22 miles from Patna and 310 miles from Calcutta, and is the nearest station for Bihār town, with which it is connected by a light railway.

Bakloh.—Cantonment in the Pathānkot *tahsīl* of Gurdāspur District, Punjab, situated in 32° 29′ N. and 75° 56′ E., in the Outer Himālayas, 14 miles below Dalhousie. Population (1901), 3,042. The permanent garrison consists of the two battalions 4th Gurkha Rifles. The station staff officer is also Cantonment Magistrate.

Bakreswar.—A group of hot sulphur springs, in the head-quarters subdivision of Bīrbhūm District, Bengal, situated in 23° 53′ N. and 87° 22′ E., on the banks of the Bakreswar stream, about a mile south of Tāntipāra village. The temperature of the water varies from 128° to 162°. About 120 cubic feet of water per minute are ejected from the hottest well. A group of temples to Siva, mostly modern, are much resorted to by pilgrims. Bakreswar is also a *pithasthān* or sacred place, where the forehead of the goddess Saktī is said to have fallen.

Bālāganj.—Village in the North Sylhet subdivision of Sylhet Dis-

trict, Eastern Bengal and Assam, situated in 24° 39′ N. and 91° 50′ E., on the right bank of the Kusiyārā river. It is the most important centre of trade in the Surmā Valley, with a large business in rice, mustard, linseed, jute, oil, *sītalpātī* mats, and salt. The public buildings include a dispensary. Bālāganj is a place of call for river steamers, and a European firm has opened a warehouse for the sale of salt and oil.

Balāgarh.—Village in the head-quarters subdivision of Hooghly District, Bengal, situated in 23° 8′ N. and 88° 28′ E., on the bank of the Hooghly river. Population (1901), 763. Balāgarh is the seat of a large boat-building and timber trade. On the alluvial islands in the vicinity vegetables are largely grown for the Calcutta market.

Bālāghāt.—The name given in Berār to the upland country above the Ajanta ridge, sloping southwards beyond the *ghāts* or passes which lead up to it from the north. The Bālāghāt is the most northerly portion of the table-land of the Deccan.

Bālāghāt ('above the passes').—The name given by the Musalmāns of Bijāpur to a region in Southern India conquered by them from Vijayanagar in the seventeenth century. It comprised the north-east part of Mysore and the Bellary, Anantapur, Kurnool, and Cuddapah Districts of Madras.

Bālāghāt (*Bālā*, 'above,' and *ghāt*, 'a mountain pass').—Range of hills in the western half of Hyderābād State. It extends from the Biloli *tāluk* in Nānder District in the east, through the southern portion of Parbhani District, past Dhārūr and Pātoda to Ashti in Bhīr District in the west, having a length of 200 miles and a width which varies between 3 and 6 miles. A spur of this range branches off from Ashti, and taking a south-easterly direction traverses the tracts which lie between the rivers Sīna, Mānjra, and Kāgna, comprising the Districts of Bhīr, Osmānābād, and Gulbarga, and terminates in the last-named District. Another spur starts from the south of Parbhani District, also in a south-easterly direction, and passes through the Rājūra *tāluk* of Bīdar District, south of Kaulās in Nizāmābād District. The country enclosed by the range and its two spurs forms a plateau, known locally as the Bālāghāt.

Bālāghāt District ('above the passes').—District in the Nāgpur Division of the Central Provinces, lying between 21° 19′ and 22° 24′ N. and 79° 39′ and 81° 3′ E., with an area of 3,132 square miles. It is bounded on the north by Mandlā District; on the east by Bilāspur and Drug Districts, and by the Kawardhā and Khairāgarh States; on the south by Bhandāra; and on the west by Seonī.

Physical aspects.

Bālāghāt consists of an upland section of the most easterly portion of the Sātpurā plateau, and of a strip of low country forming part of the valley of the Waingangā, and extending along the southern and western border of the

hills. The eastern ridge of the Sātpurās, known as the Maikala range, divides it from the Chhattīsgarh plain. The hills and elevated plateaux, which occupy about two-thirds of the District, extend in the north almost across its entire width, with the exception of a small lowland strip to the north-west consisting of the valley of the Wainganga, here only about 10 miles wide, and forming the Mau estate. The greater part of the hilly country is included in the Baihar *tahsīl*, and, outside the Feudatory States, is perhaps the wildest and most backward area in the Province. It consists mainly of the three table-lands of Paraswāra, Baihar, and Raigarh, from west to east. The Raigarh plateau, about 2,000 feet high, is a small open stretch of undulating country covered with high grass, and surrounded by thickly wooded hills, the highest peaks of which rise to 2,900 feet. It is drained by the Hālon and Kashmīri rivers, and is approached from Baihar by the passes of Bhainsāghāt and Laptī running through dense forest. The main table-land of Baihar, to the west of Raigarh and about 200 feet below it, is also very undulating and covered with thick forest, the soil being generally sandy, and cultivation consisting principally of the minor autumn millets, as the slopes are frequently too steep to permit of the growth of rice. The valley is watered by the Banjār and its tributary the Tannor, which passes Baihar. Farther west and separated from the Banjār valley by a long ridge lies the Paraswāra plateau, slightly lower than that of Baihar and somewhat more fertile. It is watered by the Kanhār, a tributary of the Banjār, and on the west is bounded by another range of hills leading down to the Waingangā valley. The drainage of this part of the District is north to the Narbadā. South of the main plateau the hilly country consists of small and scattered table-lands, with a southerly inclination and gradually narrowing in from the west. The hills are for the most part covered with forests belonging to *zamīndāri* estates. Along the base of the outer spurs of hills lies the plain country of the District, forming part of the valley of the Waingangā, narrow and closely shut in by the hills to the north, and gradually opening out on both sides of the river to the south-east and south-west. The general elevation of this part of the District is about 1,000 feet above sea-level. It is watered by the Waingangā and several minor streams, the principal of which are the Bāgh, Ghisrī, Deo, and Son. The Waingangā flows nearly due south through Bālāghāt, its width varying from 200 yards in the upper reaches to 400 lower down. Its bed is generally rocky. The Bāgh rises in the Chīchgarh hills of Bhandāra, and flows north and north-west, forming for a short distance the boundary between Bālāghāt and Bhandāra. It is crossed by the Sātpurā Railway just before its junction with the Waingangā on the border of the District. The Ghisrī, Deo, and Son rise in the eastern range of hills, and join the Bāgh after a short and rapid course. On the west of the Waingangā the low country,

broken in places by isolated hills, lies along the eastern and southern border of the portion of the Sātpurā range belonging to Seonī District, a triangular strip of which abuts into Bālāghāt. The Sarāthi is the only stream of any consequence on this side. The lowland country is well watered and studded with fruit trees, and is principally devoted to the growth of rice.

Gneissic and metamorphic rocks are the main formations, and there are a few outliers of Deccan trap in the north. The gneissic rocks belong partly to a highly metamorphosed sedimentary and volcanic series, resembling the Dhārwār schists of Southern India and known locally as the Chilpī beds. The metamorphic or transition rocks consist of quartzites, shales, and limestones.

The extensive forests of the District are mainly of the mixed character usual in Central India. Along the Waingangā river are scattered patches of teak (*Tectona grandis*), and towards the north-east *sāl* (*Shorea robusta*) is the dominant tree. In various parts of the District fine clumps of bamboos occur. Besides *sāl*, which is plentiful, and teak, which is always scarce or local, the principal trees to be met with are *sāj* (*Terminalia tomentosa*), *beulā* (*Pterocarpus Marsupium*), *shīsham* (*Dalbergia Sissoo*), *dhaurā* (*Anogeissus latifolia*), *palās* (*Butea frondosa*), *aonlā* (*Phyllanthus Emblica*), *haldu* (*Adina cordifolia*), *lendiā* (*Lagerstroemia parviflora*), *moyen* (*Odina Wodier*), with species of *Diospyros*, *Schleichera*, *Schrebera*, *Soymida*, *Boswellia*, *Bombax*, *Garuga*, *Buchanania*, and *Stereospermum*. Shrubs and small trees include *Grewia*, *Zizyphus*, *Nyctanthes*, *Flueggea*, *Cleistanthus*, *Woodfordia*, and *Casearia*.

The usual kinds of game, including tigers, leopards, and deer, are fairly plentiful. Bison are found in the Sonāwāni forests, in Bījāgarh, and in the north of the plateau. Herds of *nīlgai* roam on the Raigarh plateau, and swamp deer are met with in the Toplā Reserve. There are a few herds of antelopes on the Baihar plateau. In the Hirri forests are some wild cattle, descended from tame ones let loose, which do serious damage to the crops but are not killed. Wild duck are plentiful in the tanks in the open country, but snipe are less frequent.

The uplands of Baihar are subject to sharp frosts in December and January, which cause much injury to the foliage of trees and the cold-season crops. The climate of Bālāghāt is that of the Nāgpur plain, but it is especially damp during the monsoon. As usual in rice country, malaria is prevalent in the autumn months. The Baihar *tahsīl*, owing to its heavy rainfall and dense forest, is notoriously unhealthy from August to December, and the mortality from malaria has largely contributed to retard immigration. The particles of mica suspended in the water also tend to produce gastritis.

The annual rainfall at Bālāghāt averages 62 inches, exceeding that of any other District in the Province. The District owes its copious rain-

fall to the fact that it is encircled by hills on the north and east, on which the rain-clouds brought up by the south-west monsoon impinge. Until within the last few years the rainfall has seldom been deficient.

History.

Bālāghāt, as it now stands, has only recently been constituted. The Baihar *tahsīl* formerly belonged to Mandlā District, and formed part of the dominions of the Gond dynasty of Garhā Mandlā. The eastern part of it was for some time assigned to the chief of Kawardhā as a reward for service. Soon after the beginning of the nineteenth century the greater part of the *tahsīl* was laid waste by an inroad of the Gond Rānī of Rāmgarh in Mandlā, and at the time of cession in 1818 the country was sparsely populated. Of the low country, the old *parganas* of Hattā, Dhansuā, and Lānji were included in Mandlā, while the tract on the west of the Waingangā belonged to the Deogarh kingdom, which was annexed by the Bhonsla rulers of Nāgpur in 1743. In 1798 the Bhonslas also obtained the Mandlā territories, and most of what is now the Bālāghāt *tahsīl* was then administered from Bhandāra. At this period the greater part of it was covered with forest, and several of the present *zamīndāri* estates originated in grants of territory made by the Marāthās for the purpose of opening up the country. In 1862, when the Baihar *tahsīl*, then attached to Mandlā, was being settled, the attention of Government was directed to its natural resources, and it was recommended that special measures should be taken to colonize it. With this object sanction was obtained in 1867 to the formation of a new District, consisting of the Baihar *tahsīl* and a fringe of open country below the hills which was taken from Bhandāra and Seonī Districts, and from which was to be obtained a supply of colonists for the upland plateaux. The task of reclaiming from waste the hitherto almost unknown plateau of Baihar was entrusted to Colonel Bloomfield, for many years Deputy-Commissioner of Bālāghāt District, and under his management some progress was made towards settling the large expanse of fertile waste land with sturdy Ponwār peasantry. But owing principally to the unhealthiness of the climate, and partly also to changes in Government policy and the neglect of local officials, no very great or permanent advance has been made; and the tract remains one of the poorest in the Province. Very recently fresh measures have been taken for the systematic encouragement of immigration. A scheme for liberal advances for the reclamation of land has been sanctioned, the construction of a number of tanks undertaken, and other inducements offered to immigrants of the more skilful agricultural castes.

The archaeological remains are not of much importance. Baihar contains a number of stone tanks and ruined temples, some built in the Hemādpanti style without cement. The fort of Lānji was built by the Gonds early in the eighteenth century, and was afterwards the head-

quarters of a *kamaisdār* under the Marāthās. Human sacrifices are said to have been formerly offered at the temple of the Lanjki Devī, the tutelary deity of the place. About a mile from the town, in the bamboo forest, stands the temple of Koteshwar, at which a small annual fair is held. At Mau, in the middle of a tank, about a mile from the village, a granite platform has been constructed on which is the image of a Nāga and a pillar. Other remains are at Bīsāpur near Katāngī, Sonkhār, Bhīmlat, and Sawarjhiri near Bhīri.

Population.

The population of Bālāghāt at the last three enumerations was as follows: (1881) 340,614, (1891) 383,363, and (1901) 326,521. Up to 1891 the District prospered and the rate of increase was about equal to the Provincial average. During the last decade the decrease of population has been nearly 57,000 persons, or about 15 per cent. The District was very severely affected by famine in both 1896 and 1897, and the Bālāghāt *tahsīl* also in 1900, and the decrease of population is mainly to be attributed to this cause. About 11,000 persons emigrated to Assam during the last decade. The District contains one town, BĀLĀGHĀT, and 1,075 inhabited villages. The principal statistics of population based on the Census of 1901 are shown below:—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Bālāghāt . .	1,388	1	582	239,141	172	−17·6	5,543
Baihar . .	1,744	...	493	86,230	49	− 6·1	1,485
District total	3,132	1	1,075	325,371	104	−14·9	7,028

In 1904, 11 villages with 1,150 inhabitants were transferred from Bālāghāt to Mandlā, while a tract of 'reserved' forest was received from that District. The revised totals of area and population are given above. About 75 per cent. of the population are Hindus, 22 per cent. Animists, and 6,454 persons are Muhammadans. The eastern portions of the District have been largely populated by immigration from Chhattīsgarh, as is shown by the fact that nearly 145,000 persons, or 44 per cent. of the total, speak the Chhattīsgarhī dialect. Of the balance, the language of 84,342 is shown as Marāthī and of 54,168 as Gondī. The Ponwārs, numbering 41,106, have a special dialect, a mixture of Hindī and Marāthī, and the Marārs another of somewhat the same nature.

The principal landowning castes are Ponwārs, Gonds, and Lodhīs. Ponwārs (41,000) are the best cultivators and are especially skilful at the irrigation of rice. Many Ponwārs are lessees of villages in the *zamindāri* estates and headmen of *ryotwāri* villages in the Baihar *tahsīl*.

The Lodhīs (18,000) are partly immigrants from Chhattīsgarh, and partly from Northern India. Gonds (73,000) constitute 32 per cent. of the population, and Baigās and Binjhāls (6,000) 2 per cent. The Gonds are found in both the Bālāghāt and Baihar *tahsīls*, and those of the open country are gradually learning settled methods of cultivation from their Hindu neighbours. Those of the Baihar *tahsīl* are still backward and migratory. The Pardhāns are the priests of the Gonds and take the clothes and jewels of the dead, and the Ojhās are bird-catchers and tattooers. The Gonds are polygamous in Bālāghāt, and the number of a man's wives gives an indication of his wealth and dignity, as many as six being by no means unusual. On market days a Gond goes to the bazar with all his wives walking behind him to show his importance. The Baigās also are priests of the Gonds, and are employed to lay the ghosts of persons who have been killed by tigers. They are one of the wildest of the tribes and are incapable of sustained manual labour, though they are clever at transplanting rice-plants. This is the only field-work which they usually do for hire. They collect forest produce and exchange it for small quantities of grain, and will subsist for weeks together on roots and fruits, in the collection of which they display the greatest skill. Since the system of *bewar* or shifting cultivation has been stopped in Government forests, the Baigās are hard put to it to earn a living. An attempt was made to teach them to adopt regular cultivation by settling them in five villages under the direct supervision of the revenue officials of Baihar, but it has been given up as a failure. Some idea of the difficulty to be encountered may be gained from the fact that Baigā tenants, if left unwatched, would dig up the grain which they had themselves sown and eat it. They are skilled woodmen and some are employed as forest guards. They also catch fish and make bamboo matting to a small extent. Both Gonds and Baigās suffered severely in the famines. Farm-servants are recruited from all castes, but are principally Gowāras. In the Baihar *tahsīl* are a number of Golars (1,200) and Banjārās (1,000) who are professional cattle graziers. About 72 per cent. of the total population were shown as dependent on agriculture in 1901.

Christians number 219, including 191 natives, most of whom belong to the Bālāghāt Mission. This institution is unsectarian, and its efforts are principally directed to the conversion of the Gonds and Baigās. It was founded by the Rev. J. Lampard, who still directs it; and it has four stations—at Bālāghāt, Baihar, Nikum, and Khursīpār—with schools at each station, an orphanage, and an industrial farm.

Agriculture.

The quality of the soil in the plains is as a rule much superior to that of the plateau. It is of greater depth and more fertile, while in Baihar the mixture of particles of mica with the soil also reduces its productive capacity. The alluvial land on

the banks of the Son and other rivers in the eastern parts of the lowlands is the most fertile of all, but its area is insignificant. Next to this the richest and deepest soil is found in the strip about ten miles wide extending along the left bank of the Waingangā, from the Dhansuā hills to its junction with the Bāgh. The plains of Dhansurā and Hattā *parganas* are rich in black and brown soil of superior quality and good depth; and there is also good brown soil in the north Karolā tract to the west of the Waingangā, and in Bhadrā *zamīndāri* to the extreme south-east. In the hilly country and the Mau valley the land is generally medium or poor, dark soil being found only in patches in the Mau valley and in the shallow depressions which form a characteristic feature of the plateaux. The Raigarh plateau is the most fertile portion of the Baihar *tahsīl*, but the tract is very thinly populated, and much of the land unreclaimed. The good quality of the soil, however, renders this area rich in pasturage. In the hill villages of the *zamīndāris* the land is, as a rule, very poor, being largely intermixed with stones and gravel or coarse sand.

Of the total area, 923 square miles, or 29 per cent., are included in the 12 *zamīndāri* estates. There are about 230 *ryotwāri* villages with an area of 370 square miles, of which 90 are cultivated and pay a revenue of Rs. 20,000, while 4,000 acres have been sold outright under the Waste Land Rules. The remaining area is held on the ordinary *mālguzāri* tenure. The following table gives the chief statistics of cultivation in 1903–4, with areas in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Bālāghāt . .	1,388	561	24	429	308
Baihar . .	1,744	220	3	467	664
Total	3,132	781	27	896	972

Not much of the fertile land in the low country remains unoccupied, but elsewhere there is considerable scope for extension of cultivation. Rice occupies 366 square miles, *kodon* and *kutkī* 137, wheat 23, *urad* 75, linseed 57, gram 34, and *tiurā* 36 square miles. Rice is by far the most important crop, and in sowing it the system of transplantation is usually practised. *Kodon*, the staple food of the Gonds, is grown chiefly in the hilly tracts, and on the plateaux of Baihar and Raigarh. Tobacco is a very profitable crop in the alluvial soil of the Son valley, where it covers rather less than 1,000 acres. Castor is sown in rotation with tobacco. Sugar-cane was grown on 1,300 acres in 1903–4.

Between 1867 and 1895 the area taken up for cultivation increased by 31 per cent., and that actually cropped by 19 per cent. The area on which two crops were grown in the year and the number of tanks con-

structed for irrigation largely increased during the same period. The famines of 1897 and 1900, however, caused a decline in the cropped area, which had not been recovered by 1903–4. Manure is now more largely applied to the rice crop, and cattle and small stock are sometimes penned at night in the fields during the summer months. During the decade ending 1903–4, about Rs. 72,000 was advanced by Government under the Land Improvement Loans Act, and nearly 7½ lakhs under the Agriculturists' Loans Act.

Cattle are bred principally in the Baihar *tahsīl*, where there are excellent grazing-grounds. The ordinary cattle are small and not particularly strong. The best bullocks are bred by Golars and are sold as yearlings at fairly good prices. Bulls are reserved for breeding by the owners of any considerable number of cows. Buffaloes are used for the heavy work of hauling the rice plants from the nurseries at the time of transplantation. They are not bred to any considerable extent in Bālāghāt, but young bulls are imported from the northern Districts. The grazing-grounds are generally adequate, and those of the Baihar *tahsīl* are resorted to by large herds of cattle from the surrounding Districts during the hot months. There are no members of the professional shepherd caste, but goats are bred by ordinary landholders for food and for sacrifice. Pigs are reared for the same purposes in the Baihar *tahsīl*. Very few sheep are kept. The principal cattle-markets are at Wārāseonī and Lālburrā in the plain country, and at Bhīri on the plateau.

About 150 square miles can ordinarily be irrigated, but in 1903–4 the irrigated area was only 27 square miles owing to the unfavourable rainfall. With the exception of about 7 square miles under sugar-cane and garden crops, this is practically all rice land. Nearly 40 per cent. of the rice area, or 25 per cent. of the total area, can be watered in a normal year. There are nearly 3,000 tanks and about 4,000 wells, the latter being generally used for garden crops and sugar-cane. Numerous tanks have been constructed by Government agency in the Baihar *tahsīl*, and plans for much larger works to protect a large proportion of the District have been prepared.

Forests.

The Government forests cover an area of 972 square miles, mainly on the hilly ranges of Baihar, with blocks on the banks of the Waingangā and to the south-east. Teak grows in patches in the Sonāwāni and Paraswāra ranges. The Baihar and Raigarh ranges contain pure *sāl* forest of excellent quality, and *sāl* mixed with other species, while the lowland blocks contain only inferior timber trees. Till recently the difficulties of transport have been too great to permit of any substantial revenue being obtained from timber, but the opening of the Sātpurā Railway should greatly increase the sales. The forest revenue in 1903–4 amounted to Rs. 2,09,000, of which Rs. 1,60,000 was obtained from sales of timber and Rs. 15,000 from

grazing. The large revenue from timber was due to a contract for the supply of sleepers. The principal minor products are lac and myrabolams. The *zamīndāri* estates contain 401 square miles of forest.

Deposits of iron ore occur in the Bhadrā, Kinhī, and Bhānpur *zamīndāris*. Iron is smelted by native smiths by indigenous methods, but the output is small. Manganese deposits have been found near Bālāghāt town, and are being worked by a European company. The out-turn in 1904 was 10,323 tons, and about 300 labourers are employed. There are other numerous deposits of manganese as yet unworked. Copper ore exists in the hill of Melānjkundī. Mica is plentiful in the Baihar *tahsīl*, but the plates are not sufficiently large to be marketable. Bauxite, used for the manufacture of aluminium, is also found in the Baihar *tahsīl*. Small amounts of gold are obtained by washing in the Son and Deo rivers.

Trade and communications.

The principal local industry is the weaving of coarse cotton cloth, the chief centres being Wārāseonī and Lālburrā with the villages round them. Lālburrā *dhotīs* are well-known, and are exported to the other Sātpurā Districts and to Jubbulpore. Lingā, Borgaon, and Hattā also contain considerable colonies of weavers. In the Wārāseonī tract a number of Otāris make ornaments and vessels from brass by moulding, while the Kasārs of Wārāseonī and Hattā make ornaments of bell-metal. Glass bangles are manufactured at Lānji from imported Indian glass. At Baihar a variety of small tin vessels, such as lamps, sieves, betel boxes, and watering-pots, are made from empty kerosene-oil tins and sometimes sent to Mandlā.

Rice and the pulse *urad* are the principal exports. The former is sent mainly to Berār, and the latter to Bombay for the foreign trade. Tobacco is supplied to Chhattīsgarh from the Bījāgarh *zamīndāri*. *Ghī* manufactured from the milk of both cows and buffaloes is exported from the Baihar *tahsīl*. Of forest produce, teak is sent from the Sonāwāni and Chāregaon forests to Nāgpur and Kamptee. Bamboos are exported to Kamptee and Seonī. Hides and horns, myrabolams, lac, gum, and other forest products are largely exported. The leaves of the *tendū* tree (*Diospyros tomentosa*) are collected for the manufacture of leaf-plates and the outside covering of *bīris* or native cigarettes. Mill-woven cloth is brought from Nāgpur and Hinganghāt, and small quantities of English cloth from Bombay. The salt used is *golandāzi* or sea-salt from Bombay. *Gur* or unrefined sugar comes from Mirzāpur, while refined sugar is chiefly the produce of Mauritius. *Jowār*, wheat, and gram are received from the neighbouring Sātpurā Districts, the local supply being inadequate, and the pulse *arhar* is obtained from Berār. Brass vessels are imported from Mandlā, Bhandāra, Jubbulpore, and the United Provinces. The grain trade is principally in the hands of Mārwāri

Banias. For timber, contracts are taken for Government and *zamīndāri* forests by Muhammadan merchants from Kamptee and Raipur.

The Sātpurā extension of the Bengal-Nāgpur Railway from Gondiā to Jubbulpore, which has recently been constructed, passes through the west of the District up the valley of the Waingangā, with a length of 53 miles and six stations within its borders. The length of metalled roads is 15 miles, and of unmetalled roads 208 miles, and the annual expenditure on maintenance is Rs. 39,000, all these roads being in charge of the Public Works department. There are avenues of trees on only 16 miles. The opening of the railway will naturally effect a material alteration in the existing trade routes.

Famine.

There are no reliable records of famine previous to 1868–9, in which year the rains ended abruptly a month before time, and the rice crop in the lowlands failed, leading to acute distress. A series of partial failures of the harvest was followed in 1896–7 by a more serious deficiency, the out-turn of all crops together being only about 17 per cent. of the normal. The numbers on relief rose to 68,000, or 15 per cent. of the population, in May, 1897, and the total expenditure was 13 lakhs. In 1899–1900 the rice crop again failed, the out-turn being 23 per cent. of a normal harvest. Relief was begun in September, 1899, and continued till November, 1900, the highest number relieved being 135,000, or 35 per cent. of the population, in August, and the total expenditure amounting to 26 lakhs. During these famines most of the existing roads were constructed and the embankment of the Sātpurā Railway was built. Many tanks were made or repaired by famine loans in 1897 and by grants to landowners in 1900.

Administration.

The Deputy-Commissioner is aided by one Assistant or Extra-Assistant Commissioner. For administrative purposes the District is divided into two *tahsīls*, each of which has a *tahsīldār* and a *naib-tahsīldār*. The Forest officer usually belongs to the Imperial service, and for Public Works the District is included in the charge of the Executive Engineer, Bhandāra Public Works division.

The civil judicial staff consists of a District and a Subordinate Judge, and a Munsif at Bālāghāt town. The Divisional and Sessions Judge of the Nāgpur Division has jurisdiction in the District. Cattle-poisoning is a comparatively common form of offence.

The area now constituting Bālāghāt was formerly included in the Districts of Seonī and Bhandāra, and the land revenue demand was assessed at the thirty years' settlements of those Districts. These expired in 1896–8, when revision was commenced, but it was somewhat delayed by the famines. The revenue demand before revision was Rs. 1,26,000, which was raised to Rs. 1,87,000, or by 48 per cent. The current settlement is for a period of sixteen years, and will expire in 1914. The average incidence of revenue per acre at settlement was

R. 0-9-11 (maximum, R. 0-15-1; minimum, R. 0-2-10), the corresponding figures of rental incidence being average R. 0-15-6 (maximum, Rs. 1-11-11; minimum, R. 0-3-7). In the Baihar *tahsīl* a summary settlement has been made for seven years without rental enhancement, to allow the tract to recover from the effects of famine. In certain areas temporary remissions and abatements have been given.

The collections of land revenue and total revenue in recent years are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	1,60	1,65	91	2,43
Total revenue . .	3,27	4,55	2,73	6,19

The management of local affairs, outside municipal areas, is entrusted to a District council and three local boards, two for the Bālāghāt *tahsīl* and one for Baihar. The income of the District council in 1903-4 was Rs. 35,000, while the expenditure on education was Rs. 12,000 and on public works Rs. 9,000. BĀLĀGHĀT is a municipal town.

The force under the District Superintendent of police consists of 247 officers and men, including 3 mounted constables, besides 843 village watchmen for 1,076 inhabited towns and villages. There is a District jail, with accommodation for 59 prisoners, including 6 females. The daily average number of prisoners in 1904 was 52.

In respect of education Bālāghāt stands twelfth in the Province, 2·2 per cent. of the population (4·4 males and 0·1 females) being able to read and write. The percentage of children under instruction to those of school-going age is 10. Statistics of the number of pupils under instruction are as follows: (1880-1) 2,033; (1890-1) 2,597; (1900-1) 2,883; and (1903-4) 4,663, including 85 girls. The educational institutions comprise an English middle school at Bālāghāt town, 3 vernacular middle schools, and 62 primary schools. There are girls' schools at Bālāghāt and Wārāseonī, and a mixed school for girls and boys at Baihar supported by the Bālāghāt Mission. The expenditure on education in 1903-4 was Rs. 17,000, of which Rs. 15,000 was provided from Provincial and Local funds and Rs. 1,800 by fees.

The District has 6 dispensaries, with accommodation for 28 in-patients. In 1904 the number of cases treated was 38,483, of whom 253 were in-patients, and 560 operations were performed. The total expenditure was Rs. 6,800.

Vaccination is compulsory only in the municipal town of Bālāghāt. The number of persons successfully vaccinated in 1903-4 was 31 per 1,000 of the District population.

[J. R. Scott, *Settlement Report* (1901). A District Gazetteer is being compiled.]

Bālāghāt Tahsīl (Būrha).—Southern *tahsīl* of Bālāghāt District, Central Provinces, lying between 21° 19′ and 22° 5′ N. and 79° 39′ and 80° 45′ E. In 1901 the area of the *tahsīl* was 1,687 square miles, and the population 249,610. In 1904 a redistribution of territory between the Bālāghāt and Baihar *tahsīls* took place, and the adjusted figures of area and population are 1,388 square miles and 239,141 persons. The population in 1891 of the area now constituting the *tahsīl* was 268,108. The density is 172 persons per square mile. The *tahsīl* contains one town, BĀLĀGHĀT (population, 6,223), the head-quarters of the District and *tahsīl*; and 582 inhabited villages. Excluding 308 square miles of Government forest, 56 per cent. of the available area is occupied for cultivation. The demand for land revenue in 1903–4 was Rs. 2,16,000, and for cesses Rs. 24,000. The *tahsīl* consists of a rich lowland rice-growing tract on both sides of the Waingangā river, and of a triangular block of hills to the north-east of the plain. It includes five complete *zamīndāri* estates and parts of three others. The total area of these estates is 439 square miles, of which 267 are forest.

Bālāghāt Town.—Head-quarters of the District and *tahsīl* of the same name, Central Provinces, situated in 21° 49′ N. and 80° 12′ E. Population (1901), 6,223. When the District of Bālāghāt was constituted in 1867, the small village of Būrha was selected as its head-quarters, and the name has now been officially changed to correspond with that of the District, which means 'above the passes.' So far as the town is concerned, however, the name is a misnomer, as it lies below the hills. Bālāghāt is a station on the new Sātpurā narrow-gauge line, 25 miles from Gondiā junction and 626 from Bombay. It is situated two miles from the Waingangā river; and between the town and river lie about 1,200 acres of small forest through which roads have been laid out, while a large tank has been built on the outskirts of the town. Bālāghāt was created a municipality in 1877. The municipal receipts during the decade ending 1901 averaged Rs. 5,000. In 1903–4 they were Rs. 7,000, the chief source of income being a house tax. A manganese mine is now being worked near the town. Bālāghāt has a certain amount of trade, but no manufactures. It contains an English middle school, a girls' school, and a dispensary.

Bālāpur Tāluk.—*Tāluk* of Akola District, Berār, lying between 20° 17′ and 20° 55′ N. and 76° 45′ and 77° E., with an area of 569 square miles. The population rose from 101,673 in 1891 to 104,495 in 1901, the density being 184 persons per square mile. The *tāluk* contains 162 villages and three towns, BĀLĀPUR, the head-quarters (population, 10,486), PĀTŪR (5,993), and WĀDEGAON (5,825). A few miles from Bālāpur are the ruins of the palace built at Shāhpur by Sultān Murād, fourth son of the emperor Akbar, immediately after the

annexation of Berār by the Mughals. The fort and *chhatrī* at Bālāpur and the shrine of Shaikh Bābū at Pātūr are interesting. The demand for land revenue in 1903-4 was Rs. 3,62,000, and for cesses Rs. 28,000. The only natural boundaries are the Pūrna river on the north, and the Bālāghāt hills on the south. The *tāluk* lies almost entirely in the fertile valley of the Pūrna; but the land in the south, which occupies the lower slopes of the Bālāghāt, is comparatively poor.

Bālāpur Town.—Head-quarters of the *tāluk* of the same name in Akola District, Berār, situated in 20° 40′ N. and 76° 50′ E., 6 miles south of Pūras station on the Great Indian Peninsula Railway. Population (1901), 10,486. The Mūn river divides the town from the *peth* or suburb. Bālāpur was the chief military station of the Mughals in Berār after Ellichpur; and at a distance of a few miles from the town Akbar's son, Sultān Murād, founded Shāhpūr, now in ruins. Bālāpur is mentioned in the *Ain-i-Akbarī* as one of the richest *parganas* in Berār. Muhammad Azam Shāh, third son of Aurangzeb, is said to have resided here and to have built a mud fort. Close to the town Asaf Jāh defeated (July, 1720) the imperial forces dispatched against him by the Saiyids, after a severe engagement in which his famous Deccan artillery decided the day. The present fort of Bālāpur is the largest and strongest in Berār, the hill forts of the Melghāt excepted. It was completed in 1757 by Ismail Khān, first Nawāb of Ellichpur, and consists of an inner and outer fort, the former rising by the whole height of its walls above the latter. The outer or lower fort is a decagon, with a bastion at each angle, and the inner is a pentagon, the angles of which likewise terminate in bastions. Both forts are entered by Mughal gateways. The *chhatrī*, or pavilion, of Rājā Jai Singh, a commander of 4,000 horse in the reign of Shāh Jahān, and afterwards one of Aurangzeb's best generals, stands apart from the fort overlooking the river. It is a graceful building of black stone, 38 feet high, on a high plinth. A fine flight of steps formerly led down to the river, but these have been washed away during the last thirty years. The Jāma Masjid, once a fine building 90 feet long, but now a ruin, dates from 1623. The woven manufactures, formerly in high repute, are at present little sought after, and the importance of the town is declining.

Bālāsinor State (*Vādāsinor*).—State in the Political Agency of Rewā Kāntha, Bombay, lying between 22° 53′ and 23° 17′ N. and 73° 17′ and 73° 40′ E., with an estimated area of 189 square miles. It is bounded on the north by the States of Mahī Kāntha; on the east by the State of Lūnāvāda, and part of the Godhra *tāluka* of the Pānch Mahāls; on the west by Kaira District and a portion of the Parāntij *tāluka* of Ahmadābād; and on the south by Kaira District. The territory is about 30 miles in length and 10 to 12 in breadth, and is divided into two distinct and nearly equal parts, the Bālāsinor and Virpur sub-

divisions, the former containing 41 villages, the latter 57, much mixed with those of the adjoining State of Lūnāvāda. Except some hilly tracts in the west, the surface is flat. The soil is fertile, and, though fever prevails, the climate is tolerably healthy. There are no rivers of any note except the Mahī.

The family traces its origin to Sher Khān Bābi, a distinguished officer in the Mughal service (1664). The fifth in descent, Salābat Khān, obtained possession of the principality of Junāgarh in Kāthiāwār; on his death his territory was divided, the younger son receiving Junāgarh, and the elder son continuing to hold Bālāsinor. During the ascendancy of the Marāthās in Gujarāt, the State became tributary to both the Peshwā (1768) and the Gaikwār; and in 1818 the British Government succeeded to the rights of the Peshwā, and assumed the political superintendence of Bālāsinor. Placed at first under the supervision of the Collector of Kaira, Bālāsinor has, since 1853, formed part of the territory controlled by the Political Agent of Rewā Kāntha. The chief is entitled to a salute of nine guns. Succession follows the rule of primogeniture, and there is a *sanad* authorizing adoption. The distinguishing title of the family is Bābi, meaning 'doorkeeper,' that having been the office assigned to the founder who attained distinction at the Mughal court.

The Census of 1901 showed a total population of 32,618, or 172 persons per square mile, living in 98 villages. Hindus numbered 28,146; Musalmāns, 4,256; and Jains, 215. Numerically, the most important caste is the Kolī. The soil is generally rich, yielding millet, pulse, rice, oilseeds, sugar-cane, and cotton. Of the total area, 89 square miles are occupied for cultivation, of which nearly two-thirds were under crop in 1903-4. Routes from Gujarāt to Mālwā pass through the State.

The Nawāb is a chief of the second class, and has the power to try his own subjects for capital offences without the sanction of the Political Agent. The crop share system of land revenue prevails in some parts of the State. The revenue is $1\frac{1}{4}$ lakhs, of which Rs. 72,000 is land revenue. The expenditure is 1·1 lakhs, including tribute of Rs. 15,532 to the British Government and of Rs. 3,078 to the Gaikwār of Baroda. The State maintains a quasi-military force of 117 men, of whom 16 are mounted. They are employed for police and revenue purposes. There are 11 boys' schools with a daily average attendance of 384 pupils, and one girls' school with a daily average attendance of 57. The State maintains 2 dispensaries, which treated 10,316 patients in 1903-4. Nearly 700 persons were vaccinated in the same year.

Bālāsinor Town.—Chief town of the State of the same name in the Rewā Kāntha Agency, Bombay, situated in 22° 59′ N. and 73° 25′ E., near the Shedi river, about 41 miles east of Ahmadābād. Population

(1901), 8,530. The town is surrounded by a stone wall with flanking bastions and four gates. On the high ground to the north stands the Nawāb's palace. On a hill 3 miles from the town an annual fair is held in August in honour of Dungaria Mahādeo. The town is administered as a municipality.

Balasore District.—Northern District of the Orissa Division of Bengal, situated between 20° 44′ and 21° 57′ N. and 86° 16′ and 87° 31′ E., with an area of 2,085[1] square miles. The District of Midnapore bounds it on the north-east; the wooded hills of the Tributary States of Mayūrbhanj, Nīlgiri, and Keonjhar lie along the northern and western flank; and on the south the Baitaranī river marks the boundary of Cuttack. The Bay of Bengal forms the eastern boundary.

Physical aspects.

Balasore District consists of a strip of alluvial land lying between the sea and the hills which rise from the western boundary. This strip varies in breadth from about 30 miles at the north-east extremity to 10 miles at the narrowest or central portion and 40 miles in the south. Along the coast is a belt of land about 3 miles broad, which is impregnated with salt and unfit for cultivation. The western portion which runs along the foot of the hills is jungly and uncultivable. Between these two extremes lies the fertile arable country which constitutes the greater part of the District. It is watered, proceeding from north to south, by the river systems of the Subarnarekhā, Hāskurā, Sārathā, Pānchpāra, Burhābalang, Kānsbāns, Sālandī, and Baitaranī. The Subarnarekhā, which rises in Chotā Nāgpur, pursues a winding course of some 60 miles in this District. It communicates with the coast canal at Jāmkundā lock, and is largely used by country boats from Calcutta. The Hāskurā is a hill stream which rises in Mayūrbhanj; it contains very little water in the hot season, but during the rains it receives and carries away a great portion of the Subarnarekhā floods. The Sārathā runs a course parallel to the Hāskurā. The Pānchpāra is formed by the confluence of several hill streams from Mayūrbhanj, the principal being the Bāns, Jāmira, and Bhairingi, which unite, bifurcate, and reunite in the wildest confusion. The tide runs up only 10 miles; and although the interlacings constantly spread into open swamps, yet one of them, the Bāns, is deep enough at certain parts of its course for boats of 4 tons burden. The Burhābalang, on which Balasore town is situated, runs a tortuous course of 35 miles; the name signifies 'The old twister.' The tide runs up 23 miles; and though sea-going steamers can no longer enter it, owing to the sand-bar across its mouth, it is navigable by brigs and sloops as far as Balasore town. The Kānsbāns, which is formed by the confluence of a number of small hill streams rising in the Tributary

[1] The area shown in the *Census Report* of 1901 was 2,059 square miles; that given above is taken from figures supplied by the Surveyor-General.

States, is liable to sudden freshes, and eventually reaches the sea by two mouths, the lower of which is called the Gamai, while the northern retains its original name. The Baitaranī, which rises in Keonjhar State, forms the boundary between Balasore and Cuttack. After its junction with the Brāhmanī, the united stream flows under the name of the Dhāmra into the Bay of Bengal. The river is navigable as far as Olokh, 15 miles from the mouth; beyond this point it is not affected by the tide and becomes fordable during the hot season. It receives two tributaries on the Balasore bank—the Sālandī and the Matai. A large weir has been constructed across the Baitaranī at Akshayāpadā, to dam the water during the dry season for the supply of the portion of the High-level canal between Akshayāpadā and Bhadrakh.

The Nīlgiri hills consist of granitoid gneiss, interfoliated with which are occasionally found bands of a chloritic rock approaching serpentine in texture. This rock yields a beautiful, compact, and very tough material, which is at the same time soft and easy to work. A few miles west and south-west of Jugjhuri the rocks alter considerably and assume a hard, tough, indistinctly crystallized hornblendic character. Still farther to the south-west and near the Sālandī river well-foliated quartz schist comes in. Laterite in a compact form occurs along the base of the Nīlgiri hills[1].

Along the coast as far north as the Burhābalang river are large grassy plains, with occasional sparse patches of cultivation and low jungle on the sand ridges and near the tidal streams. North of the Burhābalang, especially round the mouth of the Hāskurā and Subarnarekhā, are numerous tidal creeks fringed with heavy jungle. The cultivated land has the usual rice-field weeds, while ponds and ditches are filled with floating water-weeds or submerged water-plants. Near human habitations shrubberies of semi-spontaneous shrubs are common, and are loaded with a tangled mass of climbing *Convolvulaceae*. The arborescent portion of these village shrubberies includes the red cotton-tree (*Bombax malabaricum*), *jiyal* (*Odina Wodier*), *Tamarindus indica*, *Moringa pterygosperma*, *pīpal* (*Ficus religiosa*), banyan (*Ficus bengalensis*), and the palms *Borassus flabellifer* and *khajūr* (*Phoenix sylvestris*). There are no forests; but in the west of the District, where the boundary approaches the hills and the lands are higher, patches of jungle occur, including a little *sāl* (*Shorea robusta*), which rarely attains to any size. The usual bamboo is *Bambusa arundinacea*. Open glades are filled with grasses, sometimes of a reedy character. Sedges abound, and ferns are fairly plentiful.

Black bears are found in the north, and tigers, leopards, hyenas,

[1] 'The Geological Structure and Physical Features of the Districts of Bānkurā, Midnapore, and Orissa,' *Memoirs, Geological Survey of India*, vol. i, pt. iii.

spotted deer, antelope, hog deer, mouse deer, civet cat, and hare are common in the more jungly portions of the District.

The District is directly on the track of the cyclonic storms which frequently cross Orissa during the monsoon season, and the extremes of climate are more marked than in most parts of Bengal. In April and May the average maximum temperature is 98°. The mean temperature falls from 89° in the hot months to 83° in the monsoon and to 74° in February. Dry westerly winds often blow during the hot season, and these are followed by well-marked south-west monsoon conditions; the humidity thus ranges from 79 per cent. in April and May to 89 per cent. in August. The annual rainfall averages 60 inches, of which 5·1 inches fall in May, 9·0 in June, 12·1 in July, 11·5 in August, 11·2 in September, and 5·1 in October.

The District is subject to floods, due to the sudden rising of the rivers in the hills. Protective embankments have been built, the principal being the Bhograi and Sālsā Pāt on the lower reaches of the Subarnarekhā; but the protection afforded by them is far from complete. An exceptionally high flood occurred in 1868; and there were floods of inferior height but more serious in results in 1892 and 1896, the latter causing a great loss of crops in the south of the District. Other years of high floods were 1855, 1866, 1872, 1883, 1886, 1888, 1894, 1897, and 1898. In October, 1900, the water rose 18 inches higher than in any flood previously recorded, and breached the railway line and destroyed crops and cattle, though it caused very little loss of human life. The cyclones to which Balasore is exposed are generally accompanied by irresistible storm-waves, which vary in height from 3 to 10 feet and sometimes penetrate as far as 10 miles inland. Such calamities occurred in 1823, 1831, 1832, 1848, and 1851. In the severest of these, the cyclone of 1831, 26,000 persons lost their lives. Cyclones have also occurred in 1872, 1874, and 1891; but these were not accompanied by storm-waves.

History.

The early history of Balasore presents no special features of interest beyond such as are given in the article on ORISSA. The English settlement in the District dates from 1633, when a factory was established in BALASORE TOWN; but the country did not pass into the hands of the British till the acquisition of Orissa in 1803. It was created a separate District in 1828. There have been many minor changes of jurisdiction, but it is unnecessary to detail them here.

Population.

The population of the present area increased from 770,232 in 1872 to 945,280 in 1881, to 994,675 in 1891, and to 1,071,197 in 1901. The great increase between 1872 and 1881 was due partly to improved enumeration, and partly to a recovery from the losses caused by the famine of 1866. The District

often suffers from severe epidemics of cholera. The worst outbreak took place in 1892, when this disease was responsible for a mortality of 15 per 1,000. Elephantiasis is extremely common. Fever prevails in the cold season; but the country is singularly free from malaria, except in the Jaleswar *thāna*, which is very unhealthy.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Balasore	1,155	1	2,112	592,544	513	+ 8·3	43,512
Bhadrakh	930	1	1,246	478,653	515	+ 6·9	39,974
District total	2,085	2	3,358	1,071,197	514	+ 7·7	83,486

The two towns are BALASORE, the District head-quarters, and BHADRAKH. The density of population is greatest in the Bhadrakh *thāna*, where it rises to 662 persons per square mile. The largest increase in the decade ending 1901 took place in the Chāndbāli and Bāsudebpur *thānas* in the south-east of the District, both of which contain much land fit for cultivation. The District send numerous emigrants to the Twenty-four Parganas and to Calcutta, where many of them are employed as domestic servants and cooks; but otherwise there is little migration except to and from the neighbouring Districts and States. The vernacular is Oriyā. Of the population, 1,033,166 (96·4 per cent.) are Hindus, 28,340 (2·6 per cent.) Musalmāns, and 0·8 per cent. Animists.

The most numerous castes are the Khandaits (211,000), originally the feudal militia of the Rājās of Orissa, Brāhmans (120,000), Gauras (74,000), and Rājus (47,000). Gokhās (31,000) and Golās (34,000) are more numerous in this District than elsewhere, while other Orissa castes are Kāndras, usually day-labourers and *chaukīdārs* (32,000), and Karans, the writer caste (26,000). Agriculture supports 79 per cent. of the population, industries 9·6 per cent., commerce 0·3 per cent., and the professions 1·1 per cent.

Christians number 1,274, of whom 1,110 are natives. Two missions are at work, a Roman Catholic and an American Free Baptist Mission. The latter, which has been in the District since 1832, has 6 stations. It maintains at Balasore a high school, an English school for European boys and girls, 5 Kindergarten lower primary schools, and a middle English school; and at other stations 2 middle English schools and one vernacular school, as well as 31 lower primary schools and one Kindergarten school. Industrial work is taught, including farming, weaving, and carpentry. The mission also possesses three orphanages, and

carries on medical work on a large scale. The Roman Catholic mission is a comparatively small one; it works chiefly in the town of Balasore, where it possesses a large chapel and an orphanage for native girls.

Agriculture.

The alluvial tract which extends through the centre of the District is fertile. The higher land on the west is for the most part rocky, but in some places where vegetable deposits occur it is very productive. Along the coast, except in years of excessive rainfall, the soil is generally infertile on account of the deposits of salt. Lands are ordinarily divided into three classes: *jalā*, or rice lands; *pāl*, or rich river-side lands growing tobacco, cotton, *rabi* crops, and the best rice; and *kālā*, the highlands of the homestead, which generally grow vegetables.

The chief agricultural statistics for 1903-4 are shown below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.	Irrigated from canals.
Balasore . .	1,155	735	121	...
Bhadrakh . .	930	591	98	63
Total	2,085	1,326	219	63

Of the cultivated area only one per cent. is estimated to be twice cropped. Rice is the principal food-grain, and includes three crops: *sārad* or winter rice, *biāli* or autumn rice, and *dālua* or spring rice. Of these, winter rice is estimated to cover 1,025 square miles, or 77 per cent. of the whole area under cultivation. On the higher levels the crop is sown broadcast, but in low lands the seedlings are transplanted. The sowing takes place in May or June; but the reaping seasons vary for different varieties, *āsu* being reaped in August or September, *kandā* in September or October, and *guru* from November to January. *Biāli* rice, which is sown in May and reaped in August and September, covers 168 square miles, while the area under *dālua*, sown in November and December and reaped in March, is ordinarily very small. The other crops are of minor importance, pulses covering only 17 and oilseeds 16 square miles.

Cultivation has extended by 40 per cent. during the last seventy years, but owing to the innate conservatism of the Oriyā little improvement is visible in the methods adopted. Various experiments have been made at the instance of Government with new crops and modern implements, but these have not found favour with the ryots. Little advantage has been taken of the Land Improvement Loans Act, but useful work has been done under the Agriculturists' Loans Act, particularly in times of distress following floods.

The cattle are similar to those common in South Bengal. Fodder

is scarce in the centre of the District, but extensive pasture lands along the coast and the higher land in the west afford good grazing.

The only irrigation system is that provided by the High-level Canal, which has within the District a length of 19 miles, in addition to 50 miles of distributaries. It commands 90 square miles, of which 69 square miles are actually provided with means for irrigation. The area irrigated in 1903-4 was 63 square miles. In addition to this, water from the rivers is utilized in order to irrigate the crops near their banks.

Laterite is found along the west of the District, and is used for building; the honeycombed variety was largely used in former times for temples. Chlorite is also obtained from the hills in the western border, and is the material from which all ancient statues and idols were carved; at the present time it is used for the manufacture of plates and bowls.

Cotton-weaving and mat-making are carried on, and brass and bell-metal articles are manufactured.

Trade and communications.

The chief imports are European cotton piece-goods, oil, salt, and spices; the principal export is rice, which in favourable seasons is dispatched in enormous quantities by sea, canal, and rail. Other exports are hides, jute, oilseeds, timber, and stoneware. Rice is shipped to Ceylon and Mauritius, but otherwise trade is carried on chiefly with Calcutta and Madras. Balasore and Chāndbāli are the chief centres of the seaborne trade, other places of trade being Māndhāta on the Coast Canal, Bāliāpāl on the Matai river, and Bārabātia on the Guchīdā river, a tributary of the Subarnarekhā. A great deal of the rice exported was formerly carried by native coasting vessels, but the silting up of several of the smaller ports and the opening of the Coast Canal and the railway have recently caused a great decline in the volume of this trade. The imports which passed through the ports of Chāndbāli and Balasore in 1903-4 were valued at 28·9 lakhs and the exports at 25·7 lakhs, but these figures include a large amount of trade from Cuttack District.

The Bengal-Nāgpur Railway runs for 88 miles through the District, connecting it with Calcutta, Cuttack, and Madras. A branch line, called the Mayūrbhanj State Railway, from Rupsā junction to Baripādā in the Mayūrbhanj State, was opened in 1904. A survey for a branch from Balasore to Chandīpur on the coast is being made, and a light tramway from Balasore to tap the Nīlgiri stone quarries is contemplated. The trunk road affords communication with Midnapore and Calcutta on the north, and with Cuttack, Purī, and Ganjām on the south. Apart from this road (95 miles), which is metalled and maintained from Provincial funds, 41 miles of metalled and 268 miles of unmetalled roads, and 106 miles of village tracks, are maintained by the District board. The most important are those from Bhadrakh to Chāndbāli, from Bala-

sore to Mitrapur in Nīlgiri, from Kamardā to Bāliāpāl, from Bāliāpāl to Bastā, from Kamardā to Jaleswar, and from Singlā to Nangaleswar.

For purposes of navigation the most important rivers are the Subarnarekhā, the Burhābalang, on which Balasore is situated, the Dhāmra and Baitaranī, which connect Chāndbāli with the sea, and the Sālandī, on which Bhadrakh lies. The Coast Canal, which connects the Hooghly at Geonkhāli with the Matai at Chāribātia, has a length of 71 miles within the District; it was completed in 1887, but has not been a financial success. The High-level Canal has a course of 19 miles within this District; it is navigable, but has been little used for traffic since the opening of the railway. The Public Works department also maintains 46½ miles of protective embankments. A canal connecting the old port of Churāman with the Matai river has fallen into disrepair. A bi-weekly steamer service runs between Chāndbāli and Calcutta. The District contains eighteen ferries under the control of the District board, the most important being those where the trunk road crosses the Subarnarekhā and Burhābalang rivers.

Famine.

The District suffered grievously in the great Orissa famine of 1865-6. The rainfall of 1865 was scanty and ceased entirely after the middle of September, so that the out-turn of the winter rice crop on which the country depends was only one-third of the average. Stocks were moreover dangerously depleted, as unusually large quantities of grain had been exported. By November distress had begun to be acute, and in February, 1866, starvation appeared and relief operations were commenced; but the works were to a great extent rendered inoperative for want of rice to feed the labourers. By the month of April even the well-to-do peasants had only a single scanty meal a day, while the poorer classes eked out their subsistence with roots, herbs, and leaves. Government succeeded in importing about 12,000 maunds of rice by the end of July, but the monsoon had begun and importation on any large scale was impossible. Orissa was at that time almost isolated from the rest of India. The mortality reached its culminating point in August, when heavy rains caused great suffering among the people, who were then at the lowest stage of exhaustion, emaciated by hunger, and without sufficient shelter. Disastrous floods in the south-east of the District followed these rains; 83,000 acres were inundated, and in all the low-lying lands the crop was lost. The harvest in the higher lands was, however, a good one; the new crop came into the market in September; and though the rate of mortality continued high for some time owing to cholera, the famine came to a close in November. During the year the price of rice rose as high as 2½ seers to the rupee, and in the town of Balasore alone 10,000 paupers succumbed to starvation and disease. The total mortality was estimated at 217,608, 31,424 deaths being ascribed to diseases resulting

from starvation; 29,558 persons emigrated; and the total loss was, therefore, 247,166, or one-third of the population. The daily average of persons relieved from June to November, 1866, amounted to 26,497; out of this number, 21,945 received gratuitous relief and 4,552 were employed on light work. The total expenditure on relief works from May to November, 1866, amounted to Rs. 73,356. In 1896 the out-turn of rice was estimated at barely half of a normal crop; but though there was considerable local distress, very little relief was found necessary beyond such as was afforded by the facilities for obtaining earthwork on the railway.

Administration.

For administrative purposes the District is divided into two subdivisions, with head-quarters at BALASORE and BHADRAKH. The Magistrate-Collector is assisted at Balasore by three Deputy-Magistrate-Collectors. The subdivisional officer of Bhadrakh, who is often a member of the Indian Civil Service, has a Sub-Deputy-Collector subordinate to him. The Executive Engineer of the Balasore division is stationed at Balasore, and the Port Officer of the Cuttack and Balasore ports at Chāndbāli.

For the disposal of civil judicial work, two Munsifs sit at Balasore and Bhadrakh, subordinate to the District and Sessions Judge, who is also Judge of Cuttack and Purī. The criminal courts include those of the District and Sessions Judge, the District Magistrate, three Deputy-Magistrates, the subdivisional officer of Bhadrakh, the Sub-Deputy-Collector of Bhadrakh, and the Port Officer of Balasore port. The District Magistrate is *ex-officio* Assistant to the Superintendent of the Orissa Tributary Mahāls, in which capacity he exercises the powers of a Sessions Judge in Nīlgiri, Mayūrbhanj, and Keonjhar. The District is singularly free from serious crime, and the majority of cases are of a petty character.

The early Hindu rulers of Orissa recognized no middlemen between them and their subjects, but the residents of each village paid their quota through a headman (*padhān*). The villages were grouped into large divisions (*khand* or *bisi*) of 10 to 50 square miles, the prototypes of the later Muhammadan *parganas*; over each division was an executive officer (*khandpati*), who acted as the representative of the sovereign, and with the assistance of the divisional accountant (*bhoimūl* or *bishayī*) collected the revenue and handed it over to the head of the district (*desādhipati*). The first regular settlement was begun in 1580 by Akbar's finance minister, Todar Mal. In the central and most highly cultivated part of Balasore he made a detailed settlement, fixing the rates of rent in every village. He confirmed in possession the hereditary under-officials, the *khandpatis* and *bhoimūls* becoming *chaudhris* and *kānungos*, and being entrusted with the collection of revenue and the other rights and liabilities of *zamīndārs* for the area under their direct management. The village headmen he maintained under the appellation of *mukaddam*;

where there were no hereditary headmen or where the *padhān* had been dispossessed, collections were often made through an agent (*karji*) or farmer (*sarbarāhkār* or *mustājir*) appointed by the *talukdār*, and many of these developed into hereditary tenure-holders with rights almost equal to those of *mukaddams*. The Marāthās made no change in the character of the fiscal organization, and the above-mentioned tenures represent the most important of those found by the British Commissioners in 1803. A settlement made in 1834–5 should have expired in 1867 but was extended till 1897, when a new settlement was introduced for a term of thirty years, which will expire in 1927. The revenue demand was raised from 3·85 to 6·28 lakhs. In 1903–4 the total current demand was 6·50 lakhs, of which 5·82 lakhs was payable by 1,463 temporarily settled estates, Rs. 42,000 by 152 permanently settled estates, and Rs. 26,000 by 14 estates held direct by Government. The total incidence of land revenue was 11⅔ annas per cultivated acre. At the recent settlement the average area held by each ryot was found to be 5·48 acres, and the rates of rent ranged between Rs. 3–8–3 and R. 0–11–5 per acre, the average being Rs. 1–12–11.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees :—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	4.11	4,21	6,25	6,55
Total revenue . .	6,69	7,53	10,98	11,21

Outside the municipality of Balasore, local affairs are managed by the District board, to which subdivisional local boards are subordinate. In 1903–4 its income was Rs. 1,05,000, of which Rs. 36,000 was obtained from rates; and the expenditure was Rs. 96,000, including Rs. 43,000 spent on public works and Rs. 32,000 on education.

The District contains 9 police stations and 13 outposts; and the force subordinate to the District Superintendent consists of 2 inspectors, 28 sub-inspectors, 25 head constables, and 331 constables. In addition, there is a rural police force of 140 *daffadārs* and 1,538 *chaukīdārs*. The District jail at Balasore has accommodation for 163 prisoners, and a subsidiary jail at Bhadrakh for 14.

Of the population in 1901, 7·8 per cent. (15·7 males and 0·4 females) could read and write. The number of pupils under instruction increased from 22,737 in 1880–1 to 37,140 in 1892–3, but fell to 35,375 in 1900–1. In 1903–4, 30,034 boys and 4,447 girls were at school, being respectively 38·6 and 5·3 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year, was 1,671, including 34 secondary, 1,535 primary, and 102 special schools. The expenditure on education was Rs. 1,47,000, of

which Rs. 17,000 was met from Provincial revenues, Rs. 31,000 from District funds, Rs. 1,300 from municipal funds and Rs. 71,000 from fees. The chief schools are the Government and Baptist Mission high schools at Balasore; other special institutions are an industrial school at Alālpur, a *madrasa* at Dhamnagar, and eight schools for depressed tribes and castes.

In 1903 the District contained 11 dispensaries, of which 3 had accommodation for 71 in-patients; the cases of 43,000 out-patients and 600 in-patients were treated, and 1,700 operations were performed. The expenditure was Rs. 16,000, of which Rs. 600 was met from Government contributions, Rs. 6,000 from Local and Rs. 1,200 from municipal funds, and Rs. 3,000 from subscriptions.

The mortality from small-pox is comparatively high. Vaccination is compulsory only in Balasore municipality; but the population is not averse to vaccination, and 24,000 persons, or 23·2 per 1,000 of the population, were successfully vaccinated in 1903-4.

[Sir W. W. Hunter, *Orissa* (1872), and *Statistical Account of Bengal*, vol. xviii (1877); S. L. Maddox, *Final Report on the Survey and Settlement of Orissa* (Calcutta, 1900).]

Balasore Subdivision.—Head-quarters subdivision of Balasore District, Bengal, lying between 21° 4′ and 21° 57′ N. and 86° 21′ and 87° 31′ E., with an area of 1,155 square miles. The subdivision consists of a narrow strip of alluvial soil, shut in by the Bay of Bengal on the east and by the hilly country of the Garhjāts on the west. The population in 1901 was 592,544, compared with 546,893 in 1891, the density being 513 persons per square mile. It contains one town, BALASORE (population, 20,880), its head-quarters; and 2,112 villages. After Balasore, BĀLIĀPĀL is the chief centre of trade. A large annual fair is held at REMUNA.

Balasore Town.—Head-quarters of the District and subdivision of the same name, Bengal, situated in 21° 30′ N. and 86° 56′ E., on the right bank of the Burhābalang river, about 15 miles from its mouth, though only 6 miles in a direct line from the sea. Population (1901), 20,880, of whom 16,671 were Hindus, 3,688 Muhammadans, and 510 Christians. The name is probably derived from the temple of Mahādeo Bāneswar, which is still standing, and was so called after Bānasura, its traditional founder.

Balasore was the first place occupied by the English in Bengal. It owed its importance not so much to its convenience for tráde with Orissa as to the safety of its roadstead, near the mouth of the Ganges, which enabled sea-going ships to unload their cargoes into smaller vessels for transport up the Hooghly. The earliest mention of the name in the English records is in 1633, when a party of factors, who had reached Orissa on a voyage from Masulipatam, received permission from the local governor to trade at Balasore; but the factory does

not seem to have been permanently established until 1651. The staff usually consisted of a chief and four other factors, subordinate to the agency at Hooghly. The most interesting event in its history is connected with the war between the English Company and Aurangzeb. In 1687, when Job Charnock was driven out of Hooghly, he avenged himself by sacking Balasore; and a similar exploit was repeated in the following year by Captain Heath, who had been sent out in command of a fleet from England. The importance of Balasore declined as the navigation of the Hooghly became more familiar to European pilots, while its local trade was affected by the Marāthā invasion of Orissa, and also by the silting up of the channel of the Burhābalang river. During the eighteenth century it was regarded as a seaside health resort for the inhabitants of Calcutta. Governor Drake himself was there in 1756 when the trouble with Sirāj-ud-Daula first began. After the fall of Fort William, the factors at Balasore safely withdrew and joined the fugitives at Falta; but the little sub-factory of Balrāmgárhi (or Balrāmgachi) at the mouth of the Burhābalang river was never abandoned, and had the honour of being formally proclaimed the seat of the Presidency. In 1803, when Orissa was conquered from the Marāthās, Balasore was occupied, with trifling opposition, by a small force sent by sea from Calcutta.

The French, Dutch, and Danes also possessed settlements at Balasore. The two latter, known as Ulanshāhi (Hollandais-shāhi) and Denamārdānga, were ceded to the British in 1846. The French settlement or *loge*, known as Farāsdānga, was never ceded; it is subject to the authority of the Administrator at Chandernagore. The lease of the territory, which is only 38 acres in area, is disposed of annually by auction.

Balasore lost a great deal of its importance when Government abandoned the monopoly of the salt manufacture and trade in 1863; but the port still possesses a large trade, and is in charge of the Port Officer at Chāndbāli. The principal exports are rice and stoneware quarried chiefly in the Nīlgiri hills; and the principal imports are cotton twist, European cotton piece-goods, kerosene oil, and salt.

Balasore was constituted a municipality in 1877. Though it includes an extensive bazar, the town is in reality little more than a collection of hamlets, the area within municipal limits being 5 square miles. The income during the decade ending 1901–2 averaged Rs. 18,000, and the expenditure Rs. 17,000. In 1903–4 the income was Rs. 18,000, of which Rs. 8,000 was derived from a tax on persons (or property tax); and the expenditure was Rs. 16,000. The chief buildings are the usual public offices, the District jail, the general hospital, and a charitable dispensary, while the railway bridge over the Burhābalang is an imposing structure. The jail has accommodation for 163 prisoners, who are employed on oil-pressing, weaving of coarse cloths and carpets, and cane

and bamboo work. The chief educational institutions are the Government high school and a high school maintained by the American Free Baptist Mission.

Baldeo.—Town in the Mahāban *tahsīl* of Muttra District, United Provinces, situated in 27° 24′ N. and 77° 49′ E., on the metalled road from Muttra city to Jalesar. Population (1901), 3,367. It is generally known in the neighbourhood as Daujī, and derives its importance from a celebrated temple. A shrine was first erected in the seventeenth century, when a statue of Baldeo was found in a tank. The present temple was built late in the eighteenth century. It is of mean appearance, and is surrounded by a number of quadrangles where the resident priests and pilgrims are accommodated. The temple is in charge of a peculiar caste called Ahivāsī Brāhmans, found only in this neighbourhood. Baldeo is administered under Act XX of 1856, with an income of about Rs. 1,100. There is a primary school with about 120 pupils.

Bāle-Honnūr.—Town (or rather group of villages) in the Koppa *tāluk* of Kadūr District, Mysore, situated in 13° 22′ N. and 75° 27′ E., on the Bhadra river. Population, with associated villages (1901), 1,081. A fine bridge has recently been built across the river, which always had a ford at this point. To the north is the Bālehalli *math*, the seat of one of the principal *gurūs* of the Lingāyat sect.

Baleswar.—River of Bengal and Eastern Bengal and Assam. *See* MADHUMATĪ.

Balgaon.—Town in Amraotī District, Berār. *See* WALGAON.

Bāli.—Village in the Arāmbāgh subdivision of Hooghly District, Bengal, situated in 22° 49′ N. and 87° 46′ E., on the west bank of the Dwārkeswar river. Population (1901), 732. Bāli is the seat of a large trade in brassware and rice. Silk and cotton cloth of a superior quality are still manufactured here and in the neighbourhood, though the industry is on the decline. Dīwānganj, a contiguous village, is the seat of a large market.

Bāli.—Town in Howrah District, Bengal. *See* BALLY.

Bāli.—Head-quarters of a district of the same name in the State of Jodhpur, Rājputāna, situated in 25° 11′ N. and 73° 18′ E., 1,013 feet above the sea, about 5 miles south-east of Fālna station on the Rājputāna-Mālwā Railway. Population (1091), 5,186. The town of Bāli is walled, and possesses a fort in good repair, a post office, a vernacular school, and a hospital with accommodation for 6 in-patients. About 10 miles to the south, near the village of Bijāpur, are the remains of an ancient city called Hathūndi or Hastikūndi, the earliest seat of the Rāthor Rājputs in Rājputāna. A stone inscription found here bears date A.D. 997, and tells of five Rāthor Rājās who ruled at this place in the tenth century. The district of Bāli, which, with that of Desuri, forms the tract known as Godwār, was formerly held by the Chauhāns,

and next by the Rānās of Udaipur. It passed finally into the possession of the Jodhpur chiefs about the end of the eighteenth century.

Bālia.—Village in Dinājpur District, Eastern Bengal and Assam. *See* ALAWAKHĀWA.

Bāliāpāl.—Village in the head-quarters subdivision of Balasore District, Bengal, situated in 21° 39′ N. and 87° 17′ E., on the Matai river. Population (1901), 298. Rice to the annual value of a lakh of rupees is exported in sloops to Calcutta, Madras, and the Laccadives.

Bālipāra.—Village in Darrang District, Eastern Bengal and Assam, situated in 26° 50′ N. and 92° 44′ E., about 20 miles north of Tezpur town. Bālipāra is the terminus of a light railway, which runs from that point to the river *ghāt* at Tezpur. A large market is held every Sunday, which is attended by great numbers of coolies from the tea gardens in the neighbourhood. Prior to the construction of the railway, an outpost of military police was stationed at Bālipāra to keep the AKĀS in check. In 1835 this outpost was rushed and seventeen persons killed by the hillmen. In 1883 the Akās again gave trouble and carried off two native forest officers from the Bālipāra range office.

Balisna.—Town in the Pātan *tāluka*, Kadi *prānt*, Baroda State, situated in 23° 49′ N. and 72° 15′ E., with a population (1901) of 4,650. It is the home of the Leva Kunbīs. The town possesses a vernacular school.

Balkh.—Town in Afghān-Turkistān, situated in 36° 46′ N. 66° 53′ E.; 1,266 feet above the sea. Balkh (*Bactra*) was the capital of the old Bactrian satrapy and subsequently of the Graeco-Bactrian kings. Its siege by Antiochus the Great (206 B.C.), followed by the temporary submission of king Euthydemus, marks the last effort of Seleucid power in these regions. On the overthrow of the Graeco-Bactrian kingdom, Balkh passed under the Yueh-chi and then under the Parthians; and it was here that Artaxerxes (Ardeshīr), the first of the Sassanids, was acknowledged as Great King in supersession of the Parthian dynasty. After the overthrow of the Sassanid kingdom by the Arabs, Balkh and the adjoining territories, known as Haiāthala or Tukhāristān (now Afghān-Turkistān), fell under their sway, and the subsequent connexion of these was generally either with Khorāsān or with Trans-Oxiana. On the break-up of the Khalīfat, Balkh came successively under the rule of the Saffārids, the Sāmānids, the Ghaznivids, the Seljūks, the Shāhs of Khwārizm, the Mongols of Chingiz who destroyed the city, and of Tīmūr, from one of whose descendants it passed to the Uzbegs, Shaybānids, and Jānids of the line of Chingiz. It was temporarily occupied, under the reign of the Mughal emperor Shāh Jahān, by his sons, Murād and Aurangzeb, but was evacuated very shortly. It passed into Afghān possession under Ahmad Shāh Durrāni, but was again lost (1826) in the troublous period that followed the

expulsion of his grandson, Mahmūd Shāh. For a time it was ruled by an Uzbeg chief who owned a nominal suzerainty to Bokhāra; but in 1840, disputes having arisen between the Amīr of Bokhāra and his vassal, the former crossed the Oxus, captured and destroyed the city of Balkh, and deported the majority of the inhabitants. In 1850 Balkh was again united to Afghānistān.

There is little of antiquarian interest to be seen at the present day in the ruins of this once great city, probably one of the oldest capitals in Asia, but now a small and insignificant Tājik village. The inner walls, which are still standing, enclose an area of about three square miles. The only buildings of any importance that yet retain any form or shape are the *ziārat* and *madrasa* of Khwāja Abūnasar Pārsai, and it is doubtful whether these were built in the thirteenth or the sixteenth century. According to local tradition, Balkh has been destroyed twenty-four times; it certainly never fully recovered its destruction by Chingiz Khān, attended by the wholesale massacre of the inhabitants, though it was not until the capture of the city by the Amīr of Bokhāra (1840) that it was finally abandoned. No trace has been discovered of the ancient splendours of Bactra; and the still visible remains, which are scattered over a circuit of 20 miles, consist mainly of mosques and tombs of sun-dried bricks, and show nothing of even early Muhammadan date. The old Arab historians record a heathen temple at Balkh, called by them *Naobihār*, which Sir Henry Rawlinson points out to have been certainly a Buddhist monastery (*nawa vihārā*). The name Naobihār still attaches to a village on one of the Balkh canals, thus preserving through many centuries the memory of the ancient Indian religion.

Bālkonda.—*Jāgīr* town in the Armūr *tāluk* of Nizāmābād District, Hyderābād State, situated in 18° 53′ N. and 78° 21′ E., six miles north-east of Armūr town, and 24 miles from the Indūr station on the Hyderābād-Godāvari Valley Railway. Population (1901), 5,118. The town is surrounded by an old ruined wall, still having a few gates and posterns. It contains one temple, four mosques, one of the latter being built of stone, several tombs and shrines, and an *idgāh* used for prayers on Musalmān holidays. A fort stands near a large tank in the vicinity of the town, on the Hyderābād-Nāgpur road, and small watch-towers are perched on the topmost crags of the hills in the neighbourhood. A post office and a police station are located here, besides the *jāgīr tahsīl* office, and a civil and criminal court.

Ballabgarh Tahsīl.—Southern *tahsīl* of Delhi District, Punjab, lying between 28° 12′ and 28° 36′ N. and 77° 7′ and 77° 31′ E., with an area of 395 square miles. It lies to the west of the river Jumna, which separates it from the Bulandshahr District of the United Provinces. The population in 1901 was 126,693, compared with 119,652 in 1891.

It contains the two towns of BALLABGARH (population, 4,506), the head-quarters, and FARĪDĀBĀD (5,310); and 247 villages. The land revenue and cesses in 1903–4 amounted to 2·7 lakhs. The country is in general bare and treeless. On the east lie the Jumna lowlands, while the hills that run south from the Delhi Ridge cross the western portion of the *tahsīl*. The rest consists of a plain of sandy loam.

Ballabgarh Town.—Head-quarters of the *tahsīl* of the same name in Delhi District, Punjab, situated in 28° 20′ N. and 77° 20′ E., 24 miles south of Delhi on the Delhi-Muttra road and the Delhi-Agra branch of the Great Indian Peninsula Railway. Population (1901), 4,506. The name Ballabgarh is a corruption of Balrāmgarh, 'the fort of Balrām,' a Jāt chief who held the surrounding country under Sūraj Mal of Bharatpur, and built the fort and palace. In 1775 the estate was transferred by the Delhi emperor to Ajīt Singh, whose son Bahādur Singh was recognized in 1803 as chief and built the town. His successor was hanged for complicity in the Mutiny of 1857 and the estate confiscated. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 7,000, and the expenditure Rs. 6,300. The income in 1903–4 was Rs. 8,700, chiefly derived from octroi; and the expenditure was Rs. 6,900. The town possesses a vernacular middle school and a dispensary.

Ballālrāyandurga.—Fortified hill in the Western Ghāts, situated in 13° 8′ N. and 75° 25′ E., in the south-west of Kadūr District, Mysore; 4,940 feet above the sea. It was a stronghold of the Hoysala kings in the twelfth century. Hither the queen of Bednūr fled for refuge when her capital was taken by Haidar Alī in 1763, and here she was captured and sent as a prisoner to Maddagiridurga.

Balliā District (*Baliyā*).—Eastern District of the Benares Division, United Provinces, lying between 25° 33′ and 26° 11′ N. and 83° 38′ and 84° 39′ E., with an area of 1,245 square miles. It consists of a wedge-shaped tract of country forming the eastern extremity of the Ganges-Gogra Doāb. It is bounded on the north-east by the Gogra, which separates it from Gorakhpur and from the Sāran District of Bengal; on the south by the Ganges, which divides it from the Shāhābād District of Bengal; and on the west by Azamgarh and Ghāzīpur. Balliā may be divided into two almost equal areas: the modern alluvial formation which lies along the banks of the Ganges and Gogra, especially the former; and the uplands in the centre and west, which consist of alluvium deposited in past ages. The meeting of these two areas takes place by a gentle slope, and there is no prominent ridge. Every part of the District is highly cultivated and thickly populated. The Ganges and Gogra are the chief rivers, and every year carry on a continual process of destruction and renewal. At each bend the concave bank is

Physical aspects.

being eroded, while the opposite shore receives a new alluvial deposit to fill up the void left by the receding river. After a period of years the process is reversed, or the river suddenly cuts a new bed for itself. Besides the Ganges and Gogra, the only river of importance is the Chhotī or Lesser Sarjū, a branch from the Gogra, which leaves that river in Azamgarh, and joins the Ganges a little to the west of Balliā town. It forms approximately the boundary between this District and Ghāzīpur in the upper part of its course. The SURAHĀ TĀL, the largest perennial lake, is connected with the Ganges by a narrow deep channel, the Katihār Nadī, which admits the Ganges floods in the rainy season and drains the lake when the river falls again.

The whole District contains no rock formation; but the older alluvium is distinguished from the new by the prevalence of *kankar* or nodular limestone.

The flora of the District presents no peculiarity. The upland area is well wooded, and mango groves abound in great profusion. In the alluvial soil liable to be inundated the *babūl* (*Acacia arabica*) is the principal tree. The toddy palm (*Borassus flabellifer*) is very common in the west of the District. There is very little jungle; but where waste exists the *dhāk* (*Butea frondosa*) is found, while on the banks of the rivers tall grasses and tamarisk form a refuge for wild hog.

The wild animals of Balliā are not important, owing to the density of population. *Nīlgai* and wild hog are, however, found in the grass jungles near the rivers. Wild-fowl of numerous kinds frequent the lakes. Fish are plentiful in the rivers and ponds, and are much used for food. The fishing rights in the lower reaches of the Chhotī Sarjū belong to Government.

Balliā resembles the border Districts of Ghāzīpur and Azamgarh in climate. Extremes of heat and cold are less than in the more western Districts, but to European constitutions and also to the natives of drier tracts the climate is relaxing.

The annual rainfall averages 42 inches, equally distributed in all parts. The rainy season commences early, and as a rule lasts longer than in the Districts farther west.

History.

There is no material for a history of the District, which only became a separate entity in 1879. Many ancient mounds and ruined forts exist, which are generally assigned by the people to the Bhars and Cherūs, who are said to have held the tract before the Musalmān conquest. Some of them probably contain Buddhist remains, and attempts have been made to identify sites visited by the Chinese pilgrims. Balliā was no doubt included in the early Hindu kingdom of MAGADHA, and a thousand years later in the Musalmān kingdom of Jaunpur. Under Akbar it belonged to the *Sūbahs* of Allahābād and Bihār. In the eighteenth century it became

included in the territory subject to the Rājā of Benares. The Doāba *pargana* was ceded to the British as part of Bihār in 1765, and the rest of the District in 1775. Up to 1879 Balliā was included first in Benares, and then in Ghāzīpur District. In 1893, when a wave of fanaticism spread over the east of the United Provinces, and riots took place about the slaughter of kine by Musalmāns, the Hindus of this District took a prominent part in the movement.

Balliā contains 13 towns and 1,784 villages. Its population increased between 1872 and 1891, but decreased in the next decade. The numbers at the last four enumerations were as follows: (1872) 726,791, (1881) 975,673, (1891) 995,327, and (1901) 987,768. The Census of 1872 probably understated the population, while in 1894 a serious outbreak of fever took place. The District supplies large numbers of emigrants to Eastern Bengal and Assam. There are three *tahsīls*—BALLIĀ, RASRĀ, and BĀNSDĪH—each named from its head-quarters. The municipality of BALLIĀ, the District head-quarters, is the principal town.

Population.

The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Balliā	441	6	572	405,623	920	− 0.1	17,657
Rasrā	433	2	697	288,226	666	− 6.3	6,065
Bānsdīh	371	5	515	293,919	792	+ 4.4	8,236
District total	1,245	13	1,784	987,768	793	− 0.8	31,958

About 93 per cent. of the population are Hindus and nearly 7 per cent. Musalmāns. The decrease in population between 1891 and 1901 was much less than in the adjoining Districts, while the density is higher than in any District in the Provinces except Benares. More than 99 per cent. of the population speak Bihārī, the prevailing dialect being Bhojpurī.

The most numerous Hindu castes are: Rājputs or Chhattrīs, 129,000; Brāhmans, 117,000; Ahīrs (graziers and cultivators), 111,000; Chamārs (leather-workers and labourers), 90,000; Koirīs (cultivators), 64,000; Bhars (cultivators), 50,000; Baniās, 42,000; and Bhuinhārs (agriculturists), 31,000. The Bhars are an aboriginal race chiefly found in the Benares Division. The Dusādhs, 17,000, are noteworthy as supplying large numbers of village policemen and also of professional criminals. Among Musalmāns are Julāhās (weavers), 33,000; and Shaikhs, 8,000. About two-thirds of the total area is held by Rājputs or Chhattrīs, who also cultivate a very large proportion. The District is essentially

rural, 67 per cent. of the population being supported by agriculture, and nearly 7 per cent. by general labour.

There were no missions in the District up to 1903, and only four native Christians were enumerated in 1901. A mission has now been opened by a society called the Christian Church Workers of Canada.

Agriculture.

The upland and lowland areas present strikingly different features. In the former rice is the most important crop, covering about half the area sown with autumn crops. The spring crop area varies considerably from year to year, being greatest when there has been heavy rain early in October. In the lowlands, however, the spring crops are more important than the autumn crops. Wheat, gram, peas, and barley are grown here. There is little rice in this tract, maize and small millets being the principal autumn crops, and they can often be harvested before the flood sets in. The annual deposits of the Ganges are usually very productive; but those of the Gogra are sandy, and sometimes quite infertile. In wet or cloudy winters the spring crops are very liable to rust.

The ordinary tenures existing in the permanently settled Districts of the United Provinces are found in Balliā. A tenure called *ganwādh* is peculiar to this District. It consists in the grant by a *zamīndār* of a village or part of a village at a fixed rent in perpetuity, the grant being generally for some consideration. These grants were originally made to Brāhmans only. Complex *mahāls* extending to parts of a number of villages are very common, and the possession of a considerable tract of country by a clan of Rājputs was a prominent feature in the early history of British rule. The main agricultural statistics for 1903-4 are shown below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Balliā	441	327	47	22
Rasrā	433	270	167	66
Bānsdīh	371	256	92	23
Total	1,245	853	306	111

Kodon and other small millets covered 146 square miles, barley 193, rice 143, peas 147, and gram 121. Other food-crops of importance are maize, *arhar*, and wheat. Sugar-cane is a most valuable crop, covering 58 square miles, and poppy is grown on 6 square miles.

Before the permanent settlement, a good deal of Balliā was waste; but improved administration soon led to extended cultivation, and at the first preparation of records in 1840 it was found that the District had become fully cultivated. There has been little extension since that date. Agricultural methods show no change. Very small

advances are made in ordinary years under the Agriculturists' Loans Act, and still smaller under the Land Improvement Loans Act. Out of a total of Rs. 46,000 advanced during the ten years ending 1900, the advances in two years amounted to Rs. 35,000. In the next four years only Rs. 520 was lent.

The cattle of the District are of a poor type, and the best animals are all imported or purchased at the large fair held near Balliā town. Horse-breeding operations under the Government Stud department were formerly carried on in and near the District at Korantādīh, Buxar, and Ghāzīpur, and at that time the Government stallions were used by the *zamīndārs*. Since the abolition of the stud, about 1873, there has been a decline, but small ponies are still bred for sale in the neighbourhood. The sheep and goats are generally inferior.

Out of 306 square miles irrigated in 1903–4, 232 were irrigated from wells, 44 from tanks and *jhīls*, and 30 from other sources. Irrigation is required chiefly in the upland area, and wells are by far the most important source of supply. Rice land, however, is largely kept moist by small field embankments which hold up rain water. Artificial tanks are very numerous, but all are small excavations. Ponds and *jhīls* or swamps are made use of as long as water remains in them. The only stream used to an appreciable extent is the Katihār Nadī, which is dammed at several places, and admits Ganges water to the Surahā Tāl during the rains. In the uplands water is raised from wells in leathern buckets drawn by bullocks. Where the spring-level is higher, the lever (*dhenklī*) is used, and the swing-basket is the usual means of lifting water from ponds and streams.

Kankar or nodular limestone occurs in the upland area, and is used for making lime and metalling roads. Saline efflorescences (*reh*) are found in the west of the District, and large quantities of saltpetre and carbonate of soda are manufactured.

Trade and communications.

The most considerable industry is sugar-refining, after indigenous methods, and the raw material is sometimes imported from Shāhābād. Coarse cotton cloth is woven in many villages, chiefly for local use. A little indigo is made, but this industry is fast disappearing.

The principal article of trade is sugar, which is exported largely to Bengal, and also to Rājputāna and Bombay. Oilseeds, gram, wheat, saltpetre, carbonate of soda, and a little coarse cloth are exported, chiefly to Bengal; and the imports are rice, spices, piece-goods, salt, and metals. River traffic has survived in this District, especially on the Gogra and Chhotī Sarjū, but it seems probable that the railway extensions recently made will capture a great deal of the trade. Balliā, Majhauwā, Maniar, Belthrā, and a village near Rasrā are the chief ports. A great deal of trade, especially in cattle and ponies, is carried

on at the annual fair held at Balliā, and many small towns and villages play an important part in the trade of the District.

A branch of the Bengal and North-Western Railway from Mau in Azamgarh passes through the District from west to east, where its terminus is situated near the bank of the Gogra; another branch from Jaunpur and Ghāzīpur joins this at Phepnā. The Benares-Gorakhpur branch of the same railway traverses the north-west, crossing the Gogra by a bridge at Turtīpār. There are 414 miles of roads, of which 52 are metalled. The latter are maintained by the Public Works department, but the cost of all but 9 miles is charged to Local funds. Avenues of trees have been planted along 88 miles. The chief routes are from Balliā town to Ghāzīpur, with a branch from Phepnā to Rasrā, and from Balliā to Bānsdīh; the other metalled roads are chiefly short feeders to the railway.

Famine.

Balliā has suffered very little from scarcities. The south and east of the District are able to produce excellent spring crops after being flooded by the Ganges, and water can always be obtained from temporary wells. In 1896–7 this tract was hardly affected, and even in the west of the District nothing worse than scarcity was felt. No relief works were required in any part.

Administration.

The Collector is usually assisted by four Deputy-Collectors recruited in India. Besides the ordinary members of the District staff, an officer of the Opium department is stationed at Balliā. There is a *tahsīldār* at the head-quarters of each *tahsīl*.

Civil work is dealt with by two Munsifs, and the District lies within the civil and criminal jurisdiction of the Judge of Ghāzīpur. Balliā bears an unenviable reputation for the litigious and quarrelsome nature of its inhabitants. Affrays, and even murders, arising from disputes about the changes made by the rivers, are more common than in most Districts of the United Provinces. The more serious offences against property are, however, infrequent, though the Dusādhs have a bad reputation as thieves and burglars, and the District is the home of many pickpockets and river-thieves who ply their trade elsewhere.

Pargana Doāba was acquired in 1765 with Bihār, and the rest of the District in 1775 with the province of Benares. Doāba was administered as part of SHĀHĀBĀD DISTRICT in Bengal till 1818, when it was transferred to BENARES DISTRICT, which at that time included Balliā. Shortly afterwards GHĀZĪPUR DISTRICT, including Balliā, was separated from Benares, and in 1832 and 1837 portions of the present Balliā District were added to Azamgarh. Three *parganas* formed a separate subdivision of Ghāzīpur, administered by a member of the Indian Civil Service posted at Balliā. In 1879 a separate District was formed, and in 1894 a considerable area was added from Ghāzīpur. The whole

District was thus permanently settled, in either Shāhābād or Benares, before the close of the eighteenth century. A striking feature in the fiscal history of the District has been the tenacity with which the great landholding clans of Rājputs have maintained their hold on the land, in spite of nominal sales. This was facilitated by the fact that the permanent settlement was carried out without any attempt to record completely all interests in the land. The defect was remedied by a detailed survey, and a preparation of a record-of-rights at various times between 1837 and 1841. The records of the portion of the District included in Azamgarh were revised at the resettlements made in that District. For the greater part, however, the record was not periodically corrected, and soon became obsolete. In 1867–9 it was partially revised. At the same time village papers were prepared for the Lakhnesar *pargana*, for which no records of any sort existed. Shortly after the formation of a separate District a new revision was commenced, which was completed in 1885, and records are now maintained as in the rest of the Provinces. The present revenue demand is 6·8 lakhs, or about R. 1 per acre, varying in different *parganas* from R. 0·8 to Rs. 1·5.

Collections on account of land revenue and total revenue have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	6,13	6,36	6,45	6,64
Total revenue . .	7,85	10,55	11,26	11,95

The only municipality is BALLIĀ TOWN, but eight towns are administered under Act XX of 1856. Outside the limits of these, local affairs are managed by the District board, which had an income in 1903–4 of Rs. 86,000, of which Rs. 35,000 was derived from local rates and Rs. 25,000 from ferries. The expenditure was Rs. 96,000, including Rs. 51,000 spent on roads and buildings.

The District Superintendent of police has a force of 3 inspectors, 79 subordinate officers, and 274 constables, distributed in 12 police stations. There are also 119 municipal and town police, and 1,370 rural and road police. The District gaol contained on the average 50 inmates in 1903, but prisoners sentenced for long terms are transferred to Ghāzīpur or to a Central jail.

Balliā stands fairly high as regards the literacy of its inhabitants, of whom 3·2 per cent. (6·6 males and 0·1 females) could read and write in 1901. The number of public schools increased from 74 with 2,801 pupils in 1880–1 to 123 with 6,600 pupils in 1900–1, but part of this increase is due to additions to the District area. In 1903–4 there were 151 public schools with 7,423 pupils, all of whom

were boys, besides 13 private schools with 400 pupils. Only 455 pupils in both classes of schools were beyond the primary stage. One school was managed by Government, and 106 by the District and municipal boards. Out of a total expenditure on education of Rs. 39,000, Local funds contributed Rs. 32,000 and fees Rs. 6,000.

There are 5 hospitals and dispensaries, with accommodation for 32 in-patients. In 1903 the number of cases treated was 39,000, including 401 in-patients, and 3,256 operations were performed. The total cost was Rs. 7,600, chiefly met from Local funds.

About 43,000 persons were successfully vaccinated in 1903-4, representing the high proportion of 44 per 1,000 of population. Vaccination is compulsory only in the municipality of Balliā.

[*District Gazetteer* (1884, under revision); D. T. Roberts, *Report on Revision of Records, Balliā District* (1886).]

Balliā Tahsīl (*Baliyā*).—Southern *tahsīl* of Balliā District, United Provinces, comprising the *parganas* of Balliā, Doāba, Kopāchīt (East), and Garha, and lying between 25° 33′ and 25° 56′ N. and 83° 55′ and 84° 39′ E., with an area of 441 square miles. Population fell from 406,151 in 1891 to 405,623 in 1901. There are 572 villages and six towns, including BALLIĀ (population, 15,278), the District and *tahsīl* head-quarters, CHĪT FĪROZPUR or BARĀGĀON (9,505), BAIRIĀ (8,635), BHALSAND (5,777), and NARHĪ (6,462). The demand for land revenue in 1903-4 was Rs. 311,000, and for cesses Rs. 60,000. The density of population, 920 persons per square mile, is the highest in the District. The *tahsīl* lies along the northern bank of the Ganges, with its eastern extremity enclosed between the Ganges and the Gogra. It is noted for its fertility, the soil being of modern alluvial formation, and a large portion being subject to annual inundation by the Ganges. The area under cultivation in 1903-4 was 327 square miles, of which only 47 were irrigated, almost entirely from wells and from the Katihār Nadī. The rich alluvial soil in the river bed does not require irrigation.

Balliā Town (*Baliyā*).—Head-quarters of the District and *tahsīl* of the same name, United Provinces, situated in 25° 44′ N. and 84° 10′ E., on the north bank of the Ganges, and on the Bengal and North-Western Railway. Population (1901), 15,278. The name of the town is popularly derived from Vālmīki, the poet; but it has no history, though an attempt has been made to identity it with some of the remains visited by the Chinese pilgrims. The old town of Balliā was almost entirely destroyed by the erosive action of the Ganges between 1873 and 1877. Houses and offices were built on a new site; but the river still cut away the bank, and in 1894 the head-quarters were removed to Korantādīh. A new civil station was then laid out a mile from the Ganges, and occupied in 1900. Balliā contains the

usual public offices and a hospital and several schools. It has been a municipality since 1871. During the ten years ending 1901 the income and expenditure averaged Rs. 10,500. In 1903-4 the income was Rs. 23,000, chiefly derived from a tax on circumstances and property (Rs. 5,000) and receipts at fairs (Rs. 12,000); and the expenditure was Rs. 23,000. Sugar and cloth are manufactured; and the town is one of the chief trade centres in the District, oilseeds and *ghī* being exported, and rice, piece-goods, metals, and salt being imported. Balliā is noted for the great Dadrī fair held annually on the full moon of Kārtik (October-November). The attendance reaches 500,000 to 600,000 in favourable years, and a large trade is done in cattle and miscellaneous goods. Small charges levied from the dealers form the greater part of the municipal income. The municipality manages 1 school and aids 11 others with a total attendance of 570, besides the District school with 180 pupils.

Balligudā Subdivision.—Subdivision of Ganjām District, Madras, consisting of the Agency *tāluks* of BALLIGUDĀ, RĀMAGIRI, and UDAYAGIRI.

Balligudā Tāluk.—North-western Agency *tāluk* of Ganjām District, Madras, with an area of 1,390 square miles. It consists of a confused mass of wooded hills intersected by deep ravines, and averages about 3,000 feet in elevation. The population, which consists mostly of Khonds, was 104,714 in 1901, compared with 107,213 in 1891. They live in 472 villages. The land revenue payable by the *patros* (headmen) and the chief of Katingia is only Rs. 170. The head-quarters are at Balligudā, which is also the temporary station of the Special Assistant Agent and the Assistant Superintendent of police. To overawe the somewhat lawless Khonds, a force of 80 reserve police is stationed there in charge of an inspector. Excellent grass mats are made near it and are largely exported to the plains. The Balligudā Khonds are a wilder and more warlike type than those in Udayagiri. They are, however, getting accustomed to civilized rule, have given up Meriah (human) sacrifices since 1857, and have not taken part in any serious disturbance for nearly forty years.

Bally (*Bālī*).—Town in the head-quarters subdivision of Howrah District, Bengal, situated in 22° 39′ N. and 88° 21′ E., on the right bank of the Hooghly. The population increased from 13,715 in 1872 to 14,815 in 1881, 16,700 in 1891, and 18,662 in 1901. Bally is a flourishing town, containing paper- and bone-mills. It is a station on the East Indian Railway, 7 miles from Calcutta, and a place of call for a daily service of steamers between Calcutta and Kālna. The Bally Khāl, which forms the main drainage channel of the Dānkuni marshes, here debouches into the Hooghly, and along its right bank is a very large brick-making industry. Bally was constituted a municipality in

1883. The income during the decade ending 1901–2 averaged Rs. 20,000, and the expenditure Rs. 18,000. In 1903–4 the income was Rs. 32,000, half of which was derived from a tax on houses and land; and the expenditure was Rs. 29,000. The municipality maintains 15 miles of metalled and 13 miles of unmetalled roads.

Ballygunge.—Suburb of Calcutta. *See* CALCUTTA.

Balmer.—Town in Jodhpur State, Rājputāna. *See* BARMER.

Balodā Bāzār.—*Tahsīl* of Raipur District, Central Provinces, lying between 21° 15′ and 21° 53′ N. and 81° 38′ and 82° 59′ E., constituted in 1906 on the formation of the new Drug District. It contains the eastern portion of the old Simgā *tahsīl* which was abolished, the Deorī *zamīndāri* from the Raipur *tahsīl* and the Tarengā estate from Bilāspur District, and also that portion of Bilāspur District lying south of the Mahānadī which was transferred to Raipur. The area of the Balodā Bāzār *tahsīl* is 1,933 square miles, and the population in 1901 of the area now constituting it was 264,063, compared with 318,706 in 1891. The density is 137 persons per square mile, and the *tahsīl* contains 975 inhabited villages. The head-quarters are at Balodā Bāzār, a village with 1,858 inhabitants. The *tahsīl* includes 270 square miles of Government forest. It contains the *zamīndāri* estates of Deorī, Bhatgaon, Katgī, and Bilaigarh, with a total area of 315 square miles, of which 45 are forest, and a population of 39,254 persons. The land revenue demand in 1902–3 on the area now constituting the *tahsīl* was approximately 1·92 lakhs. The western portion, which was formerly in Simgā, is open and populous, while the tract east of the Mahānadī contains some well-cultivated country and also considerable areas of forest.

Bālotra.—Town in the Pachbhadrā district of the State of Jodhpur, Rājputāna, situated in 25° 50′ N. and 72° 15′ E., on the right bank of the Lūni river on the Jodhpur-Bīkaner Railway. Population (1901), 5,118. The town is built on a sandhill, and possesses a combined post and telegraph office and an Anglo-vernacular school. The chief industries are dyeing and stamping of cotton cloths. Just across the river is the village of Jasol, where there is a small hospital, while at Tilwāra, 10 miles to the west, a famous horse and cattle fair is held yearly in March.

Balrāmpur Estate.—The largest *talukdāri* estate in Oudh (United Provinces), situated in the Districts of Gondā, Bahraich, Partābgarh, and Lucknow, with an area of 1,268 square miles. The land revenue payable to Government is 6·8 lakhs, of which 2·4 lakhs is due on account of permanently settled estates, and cesses amount to Rs. 74,000. The rent-roll exceeds 22 lakhs. The estate is being constantly enlarged by purchase.

The family traces descent to Bariār Sāh, a Janwār Rājput, who was

deputed about 1374 by Fīroz Shāh Tughlak to suppress the marauding gangs in the east of what is now Bahraich District. Bariār Sāh settled at Ikaunā, and acquired a large estate. About 1566 Mādho Singh, in the seventh generation from Bariār Sāh, separated from his brother who held the ancestral property, and acquired an estate for himself between the Rāptī and Kuwānā. His son, Balrām Dās, founded the town of Balrāmpur and added to his father's acquisitions. The estate grew rapidly, and when Saādat Khān was appointed Nawāb of Oudh, the Balrāmpur chief was forward in resisting his authority. In 1777 Nawal Singh became Rājā and was one of the greatest warriors of the Janwārs. He was repeatedly engaged in hostilities with the Oudh officials, but, although often defeated by the Nawāb's troops, he was never subdued, and succeeded in keeping the assessment on his *pargana* at so low a rate as to amount to little more than a tribute. His grandson, Drigbijai Singh, came into possession in 1836 at the age of eighteen, and was frequently engaged in warfare with the neighbouring chiefs of Utraulā and Tulsīpur and also with the revenue officers of the king's court. On the outbreak of the Mutiny, Drigbijai Singh was conspicuous for his loyalty. He sheltered the English officers of the District within his fort, and finally sent them in safety to Gorakhpur. This loyal behaviour exposed him to the hostility of the rebel government, and a *farmān* from Lucknow divided his territories among his old enemies. A rebel force was actually sent to carry out this order, but was recalled. In the trans-Gogra campaign, which concluded the Mutiny, Rājā Drigbijai Singh joined the British force and remained with it till the remnants of the rebel army were finally driven into Nepāl. As a reward for his distinguished loyalty large estates in Gondā and Bahraich were conferred on him; 10 per cent. of the Government revenue on his ancestral estates was remitted, and the settlement of these was confirmed in perpetuity. He subsequently received the title of Mahārājā Bahādur and was made a K.C.S.I. During the controversy over rights in land in the Province of Oudh, Drigbijai Singh was one of the leaders who helped to bring about a satisfactory settlement. On his death in 1882 he was succeeded by his widow; but the estate is now held by Mahārājā Bhagwatī Prasād, K.C.I.E., an adopted son, who ranks as the premier *talukdār* of Oudh after the Rājā of Kapūrthala. BALRĀMPUR and Tulsīpur are the chief places of commercial importance in the estate, while a large fair is held at DEBĪ PĀTAN.

Balrāmpur Town.—Town in the Utraulā *tahsīl* of Gondā District, United Provinces, situated in 27° 26′ N. and 82° 14′ E., on a branch of the Bengal and North-Western Railway, and on a metalled road from Gondā town. Population (1901), 16,723. The town was founded by Balrām Dās in the reign of Jahāngīr, and owes much to the Rājās in whose estate it is situated. A handsome stone temple, profusely

carved, was erected by the late Mahārājā. Another fine stone building, containing a statue of Sir Drigbijai Singh, was erected by subscriptions from the tenants and lessees of the estate. A school with a boarding-house, a dispensary and female hospital, a large poorhouse, and an orphanage are also maintained by the estate, and are provided with excellent buildings. The Mahārājā's palace is an imposing pile enclosing a large court. The town is well built and well drained, and a new bazar has recently been laid out near the railway station. Balrāmpur has been a municipality since 1870. During the ten years ending 1901 the income and expenditure averaged Rs. 6,500. In 1903-4 the income was Rs. 8,000, chiefly raised from a tax on professions and trades; and the expenditure was also Rs. 8,000. There is a large traffic in grain, especially rice, and cotton cloth, blankets, and knives are made. Five schools have about 250 pupils, one being maintained by the American Methodist Mission.

Balsān (or Ghodna).—One of the Simla Hill States, Punjab, lying between 30° 58′ and 31° 7′ N. and 77° 24′ and 77° 35′ E., with an area of 51 square miles. Population (1901), 6,704. The State lies 30 miles east of Simla, beyond the Giri river. It is fertile and contains fine forests of *deodār*. The chief, Rānā Bīr Singh, is a Rājput who traces his descent from the Sirmūr dynasty, to which the State was tributary before 1805. The State is well administered on old-fashioned lines by the Rānā. The revenue is Rs. 9,000, out of which a tribute of Rs. 1,080 is paid to the British Government in lieu of thirty labourers.

Baltistān.—A tract under the Wazīr Wazārat of Ladākh, Kashmīr, also known as Little Tibet, lying approximately between 34° and 36′ N. and 75° and 77° E. It is bounded on the north by the Muztāgh range and Nagar; on the east by Ladākh; on the south by Kashmīr, Wardwān, and Zāskār; and on the west by Gilgit and Astor. The tract is situated in the midst of enormous mountain ranges with peaks of 25,000 and 26,000 feet, and one above 28,000 feet, and glaciers which are the largest known out of Polar regions. The villages cling to the river valleys, the most important of which are the Indus, the Shyok, and the Shigar, together with the Drās and Suru rivers which unite near Kargil, the Braldu and Bashar which join the Shigar, and the Hushe and Saltaro which join the Shyok just above Khapalu, one of the most fertile oases in Baltistān.

Physical aspects.

There are no forests of any size or value. *Deodārs* and pines grow in clumps on the hills. In the villages and along the roadsides, where water is available, poplars and willows, as well as fruit-trees, grow freely. On the hill-sides and uncultivated land cumin-seed, violets, truffles, and asafoetida are gathered by the people.

The rainfall is light, about 6 inches in the year, and the air is dry

and bracing. The snowfall is often considerable, and is of great importance to the villages which depend on the snow for their irrigation. In Skārdu and Shigar snow remains from the middle of December till the middle of March. In Rondu snow rarely lies. The cold is intense, most of the rivers freeze and form natural roads, superior to the rough tracks on their banks, and there are many villages which the sun's rays do not reach for more than an hour daily. The climate in the spring and autumn is mild ; but in July and August the heat in the villages on the Indus is very severe, especially in the sandy plains of Skārdu and the narrow rock-bound valley of Rondu.

History.

The old rulers of Baltistān, known as Rājās or Gialpos, trace their descent from a *fakīr*. One of the most famous of the Gialpos was Alī Sher, who lived about the end of the sixteenth century. He conquered Ladākh, and built the fort on the rock at Skārdu. Ahmad Shāh was the last of the independent Rājās. His fort was captured by the Dogrā general, Zorāwar Singh, in 1840, and he himself accompanied Zorāwar Singh on his ill-fated expedition into Tibet, and died in captivity near Lhāsa. Several of his near relatives were deported as political prisoners to Kashmīr, where their descendants still live. The present Rājās of Baltistān have little recognized power, but the people still look up to them with respect, and have endured their unlicensed exactions with patience.

The Baltis are of the same stock as the Ladākhis. They have Mongolian features, high cheek-bones, and eyes drawn out at the corners, but the nose is not so depressed as is the case with the Bhotis of Ladākh. There is very little to distinguish the Baltis from the Ladākhis, save the absence of the pigtail, but they are perhaps slighter in build and taller. They are good-natured and patient, and are devoted to polo. In spite of much oppression, they are a merry, light-hearted race, always ready to laugh. Their dress consists of a skull-cap, coat and trousers of wool, and raw skin boots made comfortable by grass quilted inside. They shave the head, leaving long elf-locks growing from behind the temple into which they entwine flowers.

When the Baltis adopted Islām and became Shiahs they eschewed polyandry ; and while in Ladākh, where polyandry prevails, the population does not fall heavily on the land, in Baltistān the population, owing to polygamy, is too large for the cultivated area. The density rises to 1,649 persons per square mile of cultivation in Khapalu, and the average per square mile of cultivation is 1,467. The constant subdivision of the lands held by a family leads to holdings becoming so small that the occupier can no longer subsist by cultivation, but deserts his land and turns to other means of earning a livelihood. There is in consequence much real poverty, and the Baltis emigrate to India in search of labour, or carry loads to Gilgit and Ladākh.

The principal castes are Rājā, Balti, Saiyid, and Brukpa. The Baltis are numerically the strongest, and hold most of the land; but the Rājā caste, including the local chiefs and their collaterals, hold a considerable area of cultivation and enjoy numerous privileges. The Brukpa are immigrants from Dardistān, and are a distinct people from the Baltis. According to Major Kaye, Settlement Commissioner, Kashmīr, they correspond to the Dum in Kashmīr in their position among the village community.

The most important tracts in Baltistān are Skārdu, Shigar, Braldah, Basha, Rondu, Haramosh, Kiris, Khapalu, Chorbat, Parkutta, and Tolti. Farther east lies Kargil, where some of the population are Buddhists, acknowledging the Grand Lāma of Lhāsa as their spiritual head. The Baltis have suffered great hardships from maladministration and forced labour in the past. The language of the people is Tibetan, with a small admixture of Persian and Arabic. It slightly differs from the Ladākhi language, but the two peoples understand each other's talk.

Agriculture.

Cultivation depends on irrigation; and where water is plentiful excellent crops are raised. The actual work of cultivation, except ploughing, is done almost entirely by women, as the men are away tending cattle on the distant pastures, carrying loads to Ladākh and Gilgit, or repairing the watercourses and the terraces on which their little fields are built up. In many places the fields are too small for ploughing by cattle, and then either spade labour is employed or the ploughs are drawn by human beings. The plough is light and is made entirely of wood. The chief spring crops are wheat, barley, beardless barley (*grim*), peas, beans, and lentils; while buckwheat, *chīna* (*Panicum miliaceum*), and *kangni* (*Setaria italica*) are the most important of the autumn crops. Turnips are also grown as a following crop after barley and *grim*. Except in the higher and colder tracts, or where manure is deficient, the land bears two crops each year.

Certain land, usually strong and difficult to cultivate, situated high up the source of irrigation above the cultivation proper of the village, and known as *ul ābi*, is reserved for growing fodder-grasses, chiefly lucerne. This is always watered, fenced, and carefully looked after.

The soil is light, and requires little ploughing. The time for sowing depends on the snow, and when snow lies long it is artificially cleared by sprinkling earth over it. Among other peculiarities of cultivation in Baltistān may be noticed the large amount of irrigation given to spring crops as compared with that given to autumn crops; the practice of rooting out the crops, instead of cutting them; the little preparation given to the soil after the spring crop has been harvested and before the autumn crop is sown on the same land; and the utter absence of

rotation crops. In some villages good tobacco is grown. No crops can be raised without manure. As winter approaches, earth is stored on the house-tops and mixed with the dung of cattle and human excrement. The latter is always collected in small walled enclosures. The manure is carried out in the spring in baskets and spread thickly over the land. Frost or early snowfall may cause a failure of crops.

Fruits play an important part in the economy of the Baltis. The apricots are celebrated, and are largely exported to Kashmīr and the Punjab. The dried fruit and the kernels are both in great demand. Traders pay large sums in advance for the crop. Mulberries are an important source of food. Raisins are exported. Excellent peaches, in quality hardly surpassed by the best English fruit, and good grapes, melons, and cucumbers are common.

Gold-washing is carried on in many villages, and all find it profitable, and pay most of the revenue from this source. The State charge for a licence for gold-washing is Rs. 10. In Kargil to the south-east of Baltistān the gold industry is of some importance, and for the most part the sand is excavated high above the present river-level. The present methods of washing are wasteful, and with better appliances the industry might give a large return. Arsenic is met with, and sulphur abounds. Copper is found in Rondu, and white nitre exists in several places, but is not collected.

Trade and communications.

There is very little trade. Tea, cloth, sugar, and rice are imported, and there is a small business in salt from Ladākh. The most considerable export is that of apricots and apricot kernels, but raisins are also exported to Kashmīr. A special manufacture is a very close thick black *pattū* (*frekhan*), resembling the cloth of which pilot-jackets are made. A curiosity is the *zahri-mora*, a green soft stone like an inferior jade found in the Shigar valley. Cups and plates are made of it, and in Kashmīr and the Punjab it is used as an antidote to poison and in eye diseases.

Communications are of the worst description, and money judiciously spent in road-making would add greatly to the comfort and prosperity of the Baltis. Several routes connect Baltistān with Kashmīr, Ladākh, and Astor, and one dangerous track leads to Gilgit. Of the Kashmīr routes, one passes over the Deosai plains. These lie at an elevation of 13,000 feet, and are surrounded by a ring of lofty mountains. For most of the year they are under snow, and even in the summer the cold at nights is intense. The so-called plains are mournful stretches of grass and stones, with many a bog difficult to cross, and uninhabited but for the marmots, an occasional bear, and swarms of big black gnats. The absence of wood for fuel, the distance from human habitations, and local superstitions regarding 'the devil's place' prevent the people from using the pastures of Deosai.

Baltistān has recently been placed under the charge of the Wazīr Wazārat of Ladākh. His local deputies are the *tahsīldārs* of Skārdu and Kargil. Both *tahsīls* have recently been settled by a British officer, and it is probable that the long-suffering and patient Baltis may look for better days. The ex-Rājās, or Gialpos, still exercise some authority over the people, and a definite sum out of the several collections has now been alienated in favour of each family. The total land revenue assessed at the recent settlement of the *tahsīls* of Skārdu and Kargil was 1·4 lakhs. Of this about a fourth is taken in kind.

Administration.

Baluchistān (more correctly *Balochistān*).—An oblong stretch of country occupying the extreme western corner of the Indian Empire, and situated between 24° 54′ and 32° 4′ N. and 60° 56′ and 70° 15′ E.

It is divided into three main divisions: (1) British Baluchistān, with an area of 9,476 square miles, consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories, with an area of 44,345 square miles, composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and been placed directly under British officers; and (3) the Native States of Kalāt and Las Bela, with an area of 78,034 square miles.

Baluchistān is bounded on the south by the Arabian Sea; on the north by Afghānistān and the North-West Frontier Province; on the west by Persia; and on the east by Sind, the Punjab, and a part of the Frontier Province. The western boundary from Gwetter Bay to Kuhak was settled by Colonel Goldsmid in 1871. A line from Kuhak to Koh-i-Malik-Siāh was defined by an Anglo-Persian Boundary Commission in 1896, and the southern portion of it was demarcated by pillars to the bank of the Talab river. There has been no demarcation north of that point; but the line thence to Koh-i-Malik-Siāh is governed by the agreement of 1896 and a supplementary agreement concluded in May, 1905. The Baloch-Afghān Boundary Commission delimited the northern frontier between 1894 and 1896. The boundary dividing Baluchistān from the Frontier Province on the one hand and the Punjab on the other has been defined at various times since the establishment of the Agency. That between Sind and Baluchistān was settled in 1854 and demarcated in 1862.

The Province covers a total area of 131,855 square miles, including the Native States of Kalāt and Las Bela, and is the largest of the Agencies administered under the Foreign Department. Its area exceeds that of the whole of the British Isles. The country, which is almost wholly mountainous, lies on the great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed, the drainage of which enters the Indus on the east and the Arabian Sea on the south, while on the north and west it makes its

way to those inland lakes or *hāmūns* which form so general a feature of Central Asia.

The name of the country is derived from the Baloch, whose migratory hordes gradually extended eastwards from Southern Persia in and after the seventh century, until they eventually took up a position in Kachhi about the fifteenth century. The Baloch are not, however, the most numerous people in the Province, being exceeded in numbers by both Brāhuis and Afghāns.

Physical aspects.

The characteristic divisions of the country are four in number: upper highlands, lower highlands, plains, and deserts. The upper highlands, locally known as Khorāsān, occupy the central and east-central portion of the country, extending between 28° and 31° N. Here the mountains reach an elevation of nearly 12,000 feet, while the valleys lie about 5,000 feet above sea-level. The lower highlands include the slopes of the Sulaimān range on the east, the Pab and Kīrthar ranges on the south, and the ranges of Makrān, Khārān, and Chāgai on the west. The elevation of the valleys in this tract varies from 250 feet above sea-level upwards. The plains of Baluchistān include the peculiar strips of country known as Kachhi and Las Bela, and the valley of the Dasht river. They may be described as flat triangular inlets of generally similar formation, running up into the mountains. Their population differs markedly from that of the highlands. The deserts are situated in the north-western part of the Province. They consist of open level plains covered with black gravel, or of broad expanses of deep sandhills which sometimes assume the proportions of formidable sand-mountains.

The general configuration of the mountains resembles the letter **S**. On the east the SULAIMĀN range stretches upwards in gradually ascending steps to the Takht-i-Sulaimān. The mountains then curve round in a westerly direction on the northern side of the Zhob river along the TOBA-KĀKAR hills till the CENTRAL BRĀHUI range is reached. Near Quetta the direction becomes north and south, but from about the 66th degree of longitude the general trend is again in a westerly direction through Makrān and Khārān. To the south of the Central Brāhui range the KĪRTHAR and PAB ranges occupy the south-east corner of the Agency. On the west four parallel ranges occur, the southernmost being known as the MAKRĀN COAST range, the next as the CENTRAL MAKRĀN range, north of which again lies the SIĀHĀN range. Above these are situated the RĀS KOH, skirting Khārān, and the CHĀGAI hills. The mountains are, as a rule, composed of bare rocky limestone or conglomerate, and, except in the upper highlands, seldom have much vegetation. In southern Makrān the hills are distinguished by the absence of stones; and the white clay of which they consist has been worn by the lapse of ages into most fantastic shapes. A range seldom bears

a distinctive title, but every peak is known by a separate name to the inhabitants.

No rivers are to be found carrying a large and permanent flow of water. For the greater part of the year the beds contain merely a shallow stream, which frequently disappears in the pebbly bottom. Wherever practicable, this supply is taken off for irrigation purposes. After heavy rains the rivers become raging torrents ; and woe to the man who happens to meet a flood in one of those weird gorges of stupendous depth, running at right angles to the general strike of the hills, which form so remarkable a feature of this region. Sometimes these defiles are so narrow that both sides can be touched at one time with the hands, and the walls rise many hundred feet perpendicularly upwards. The largest river in the country is the HINGOL or Gidar Dhor. The north-eastern part of the Province is drained by the ZHOB river on the east and the PISHĪN LORA on the west. Farther south the NĀRI receives the drainage of Loralai and Sibi Districts and passes through Kachhi. The rivers draining the Jhalawān country are the MŪLA, the HAB, and the PORĀLI. In Makrān the DASHT river carries off the drainage to the south, and the RAKHSHĀN, which joins the Māshkel river, to the north.

The traveller who has left the plains of India and entered the passes of Baluchistān finds himself among surroundings which are essentially un-Indian. The general outlook resembles that of the Irānian plateau, and, taken as a whole, it is unattractive, though its peculiarities are not without a certain charm. Rugged, barren, sunburnt mountains, rent by huge chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous drab. But this is redeemed in places by level valleys of considerable size, in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised. The flatness of the valleys, due to the scanty rainfall, distinguishes Baluchistān from the Eastern Himālayas.

Within the mountains lie narrow glens, whose rippling watercourses are fringed in early summer by the brilliant green of carefully terraced fields. Rows of willows, with interlacing festoons of vines, border the clear water, while groups of ruddy children and comely Italian-faced women in indigo-blue or scarlet shifts and cotton shawls complete a peaceful picture of beauty and fertility. Few places are more beautiful than Quetta on a bright frosty morning when all the lofty peaks are capped with glistening snow, while the date-groves, which encircle the thriving settlements of Makrān, are full of picturesque attraction. The frowning rifts and gorges in the upper plateau make a fierce contrast to the smile of the valleys. From the loftier mountain peaks magnificent views are obtainable.

No lakes of importance occur. The HĀMŪN-I-MĀSHKEL and HĀMŪN-I-

LORA can hardly be described as such, for they only fill after heavy floods. The same may be said of the *kaps* of Parom and Kolwa in Makrān. The SIRANDA in Las Bela is a land-locked lagoon. Astālu or Haptālār, lying off the Makrān coast, is the only island, unless the bare rock of Churna off Rās Muāri be reckoned as such.

The Province has a coast-line of about 472 miles. The distance in a direct line, however, from Karāchi to Gwetter Bay is only 335 miles. Owing to small rainfall, the salt nature of the soil, and the physical conformation of the country, the shore is almost entirely desert, presenting a succession of arid clay plains impregnated with saline matter and intersected by watercourses. From these plains rise precipitous table hills. The coast-line is deeply indented, but its most characteristic feature is the repeated occurrence of promontories and peninsulas of white clay cliffs, table-topped in form. The intermediate tract is low, and in some places has extensive salt-water swamps behind it. The chief ports on the coast are Sonmiāni or Miāni, Pasni, and Gwādar. They are much exposed, and, owing to the shoaling of the water, no large ships can approach nearer than two or three miles.

[1] For geological purposes Baluchistān is conveniently divided into three regions:—

(1) An outer series of ranges, forming a succession of synclines and anticlines comparable in structure to the typical Jura mountains of Europe. In this region we have two subdivisions: (*a*) the semicircular area of Sewistān[2], and (*b*) the ranges of Kalāt, Sind, and Makrān, which continue into Southern Persia as far west as the Straits of Ormuz. Further curved ranges of the same type extend as far as Kurdistān.

(2) A region of more intense disturbance exhibiting the typical Himālayan structure, whose southern or south-eastern limit is a great overthrust forming the western continuation of the Great Boundary Fault of the Himālaya[3]. It includes the ranges north of the Zhob and Pishīn valleys. The Sewistān semicircular area stands very much in the same relation to these ranges as does the Jura to the Alps in Europe.

(3) A region of fragmentary ranges, separated by desert depressions, including the Nushki desert and Khārān.

Little of the centre and west of Baluchistān has yet been geologically

[1] From material supplied by Mr. E. Vredenburg, Deputy-Superintendent, Geological Survey of India.

[2] Though not locally recognized, this name has come into general use in scientific literature. It includes the Marri-Bugti country and the Districts of Sibi and Loralai.

[3] For an explanation of the Great Boundary Fault and a discussion of the Himālayan structure, see *Manual of the Geology of India*.

explored. In the following table, most of the formations occur indifferently in any of the three regions. The upper Eocene igneous intrusions are, however, restricted to the second and third regional types, and the Makrān group to the coast of that name.

Sedimentary rocks.	Approximate age.	Igneous rocks.
Recent and sub-recent alluvial and eolian formations.	Quaternary (Pleistocene and recent)	Recent and sub-recent volcanoes.
[Makrān group] Siwāliks: Upper.	Upper Miocene or Lowermost Pliocene.	
Siwāliks: Middle. Lower.	Middle and Upper Miocene.	
Nāri: Upper.	Oligocene.	
Nāri: Lower.	Priabonian.	
Unconformity.	Bartonian.	Basic dikes. Intrusions of granite, diorite, and syenite.
Upper Kīrthar: Ghāzij and Spīntangi. Khojak shales (flysch facies).	Lutetian.	
Unconformity.	Thanetian to Lower Lutetian.	Intrusive, effusive, and stratified rocks of the Deccan trap formation.
Cardita Beaumonti beds (with flysch).	Montian or Thanetian.	
Dunghān group (with flysch).	Upper Senonian.	
Unconformity.	Neocomian to Lower Senonian.	
Belemnite beds.	Neocomian.	
Unconformity.	Callovian to Portlandian.	
Massive Limestone.	Bajocian to Callovian.	
Shales and Limestones.	Lias.	
Oolitic Limestone.	Rhaetic.	
Shales and Limestone.	Upper Trias.	
Unconformity.	Lower Permian to Upper Trias.	
Shales and Limestones.	Permo-carboniferous.	

Along the Great Boundary Fault we find the true Himālayan structure typically exhibited, the Siwālik series of strata rising out of the gravel plain and dipping towards the mountains beyond, as if underlying their mass. South of the Zhob valley occurs a succession of curved ranges in four distinct zones or belts, the first or outer one Siwālik, the second Eocene, the third Jurassic, and the fourth or innermost Triassic.

Of the various geological groups the upper and middle Siwāliks have, so far, proved unfossiliferous. The lowermost strata of the lower Siwāliks contain fresh-water shells and remains of mammalia. The

upper and lower Nāri appear to be conformable with one another, the latter being well represented in the Bolān Pass. The Spīntangi is a massive pale-coloured limestone that caps the scarp of the Kīrthar range. It is the most important of the nummulitic limestones in Baluchistān. Shaly intercalations occur here and there in the Spīntangi limestone, and become gradually more abundant towards its base, thus passing into the next underlying group called the Ghāzij. The Ghāzij beds are the only formations among all the rocks in Baluchistān that have as yet proved of economic importance, owing to the coal seams which they contain. When the thickness of the Ghāzij increases considerably, this group becomes very similar in appearance to the Khojak shales, the age of which is well established by the presence of nummulites contained in calcareous shales and massive dark bituminous limestone towards the base of the group. *Cardita Beaumonti* beds occur in the form of detached patches in many parts. The exposures of the Dunghān series are of limited extent. This consists of an extremely variable series of shales and limestone often merging into the flysch facies. Below comes a group of shales of Neocomian age containing innumerable specimens of belemnites, known as Belemnite beds. They rest on the massive limestone of which all the more conspicuous peaks in Baluchistān are composed. The Triassic shales and limestones, forming an extensive outcrop south of the Zhob valley, are profusely injected by great intrusive masses of coarse-grained gabbro, often altered into serpentine, and innumerable dolerite or basalt veins and dykes of the Deccan trap age. To this period also belong many of the igneous rocks, both intrusive and eruptive, which occur abundantly in all three of the regional types mentioned above. A second group of igneous rocks is represented by deep-seated intrusions, without any connexion with volcanoes; it belongs to the second and third regional types, where it forms the granite and diorite of the Khwāja Amrān, the augite-syenite and augite-diorite of the Rās Koh, and the hornblende-diorite of Chāgai. Owing to the absence of rain, the materials formed by the disintegration of the mountains are not removed by rivers, but form immense deposits which are, therefore, of enormous depth. The desert plains represent vast areas of subsidence in regions once occupied by inland seas or lakes.

[1] The flora of the plains and lower highlands resembles in general aspect the vegetation of Western Rājputāna and the adjoining parts of the Punjab. Trees and herbs are conspicuously absent; and the bare stony soil supports a desolate jungle of stunted scrub, the individual plants of which are almost all armed to the leaf-tip with spines, hooks, and prickles of diverse appearance but alike in malignancy. A few, like the two first mentioned below, dispense with leaves altogether; and others, like *Boucerosia*, protect their fleshy branches with a hide-like

[1] From notes by Major D. Prain, Director, Botanical Survey of India.

epidermis. The commoner constituents of this ill-favoured flora are *Capparis aphylla*, *Periploca aphylla*, *Boucerosia*, *Tecoma undulata*, *Acanthodium spicatum*, *Prosopis spicigera*, *Withania coagulans*, *Zizyphus Jujuba*, *Salvadora oleoides*, *Calotropis procera*, *Caragona polyacantha*, three kinds of *Acacia*, *Leptadenia Spartium*, *Taverniera Nummularia*, *Physorhynchus brahuicus*, and *Alhagi camelorum*. In low-lying parts where water is available *Tamarix articulata* and *T. gallica* are found. Here and there *Euphorbia neriifolia* and the dwarf-palm (*Nannorhops Ritchieana*) occur, the latter often in great quantities. The herbaceous vegetation is very scanty, consisting of such plants as *Aerua javanica*, *Pluchea lanceolata*, *Fagonia arabica*, *Mimulus alatus*, and *Cassia obovata*; near water, *Eclipta erecta*; and as weeds of cultivation, *Solanum dulcamara* and *Spergularia*. Two species akin to *Haloxylon*, *Suaeda vermiculata* and *Salsola foetida*, abound on saline soil. *Panicum antidotale* is the most important grass, but *Eleusine flagellifera* and a species of *Eragrostis* are also abundant.

In the upper highlands the flora is of a quite different type. The long flat valleys have, for the greater part of the year, a monotonous covering of *Artemisia* and *Haloxylon Griffithii*, diversified, where there are streams, with tamarisks and species of *Salsola*, *Arenaria*, *Halocharis*, &c. On the surrounding hills, up to an elevation of 7,000 feet above sea-level, are to be found species of *Acantholimon*, *Acanthophyllum*, *Salvia*, *Amygdalus*, *Spiraea*, *Gentiana*, *Eremotachys*, and *Campanula*. Pistachio trees, associated with ash, wild olive, and daphne, are also common. Myrtle is occasionally found in the valleys. At higher elevations *Juniperus macropoda* and *Prunus eburnea* are abundant. Other plants common at these altitudes are *Lonicera*, *Caragana ambigua*, *Berberis*, *Cotoneaster nummularia*, *Spiräea brahuica*, *Rosa Beggeriana*, *Salvia cabulica*, *Berchemia lineata*, *Viola kunawarensis*, *Leptorhabdos Benthamiana*, and two varieties of *Pennisetum*. With the coming of spring a host of bulbous and other herbaceous plants, which have lain hidden throughout the winter, send forth leaves and flowers and for a few weeks make the valleys and hill-sides gay with blossoms of divers hues. They include four varieties of *Iris*, *Hyacinthus glaucus*, *Tulipa chrysantha*, *Tulipa montana*, *Fritillaria*, *Eremurus persicus*, *Cheiranthus Stocksianus*, *Campanula Griffithii*, *Delphinium persicum*, several species of *Alyssum*, and many species of *Astragalus*. In swampy grass lands spring up *Ononis hircina*, *Ranunculus aquatilis*, *Lotus corniculatus*, *Plantago major*, and *Eragrostis cynosuroides*. The weeds of cultivation include *Adonis aestivalis*, *Hypecoum procumbens*, *Fumaria parviflora*, *Malcolmia africana*, *Sisymbrium Sophia*, *Lepidium Draba*, *Malva rotundifolia*, *Veronica agrestis*, and many others. This many-coloured carpet of flowers endures for all too brief a season, for, under the intolerable heat of the summer sun, it speedily shrivels and disappears.

The fauna has never been completely studied. In the higher hills are to be found the mountain sheep (*Ovis vignei*) and the *mārkhor* (*Capra falconeri*). The latter, which is of the Kābul and Sulaimān varieties, lives a solitary life in the glens and cavities of the mountains, while the mountain sheep wanders on the lower slopes. In the lower highlands the *mārkhor* is replaced by the Sind ibex (*Capra aegagrus*). The leopard (*Felis pardus*) is frequently seen, and the black bear (*Ursus torquatus*) is found here and there. The Asiatic wild ass (*Equus hemionus*) haunts the deserts of Khārān and Nushki. The Indian wolf (*Canis pallipes*) sometimes occurs in considerable numbers and does much damage to flocks. Several kinds of foxes are found, their skins being in some demand.

The characteristic game-birds of the country are *chikor* (*Caccabis chucar*) and *sīsī* (*Ammoperdix bonhami*), which abound in years of good rainfall and afford excellent sport. Large flocks of sand-grouse pass through the country in the winter, and the tanks are frequented by many varieties of wild-fowl. A few woodcock are also to be found. Most of the birds of Bāluchistān are migratory. Of those permanently resident, the most characteristic are the raven, frequent everywhere; the lämmergeyer, for which no place is too wild; and the golden eagle. Among the visitors the most common are different species of *Saxicola*, headed by the pied chat, and several kinds of shrikes which appear in spring in large numbers. Sea-birds are numerous along the coast.

Reptiles include the tortoise, several genera of lizards, of which the species *Phrynocephalus* is the most common, and the skink. Eleven genera of snakes have so far been discovered, the most numerous in species being *Zamenis*, *Lytorhynchus*, and *Distira*. They also include *Eristocophis macmahonii*.

The coast swarms with fish and molluscs, the former including sharks, perch, cat-fish, herrings, yellow-tails, and pomfrets.

The study of insects has been confined almost entirely to Quetta-Pishīn. Two species of locust are among the most conspicuous, and dragon-flies are common, as also are bees, wasps, &c. The latter include both Indian and European species, and many of them have been described by Russian naturalists. Butterflies are scarce, but moths are fairly numerous. Ants are found plentifully, but few species have been recognized. Sand-flies are common, and few persons escape their irritating attentions. Among the lesser-known classes of insects may be mentioned cicadas, which sometimes appear in vast numbers, and *Argas persicus*, so noxious to human beings. Plant-lice do great damage to many of the trees.

In a country which includes such varied natural divisions, differences of climate are varied and extreme. It is temperate or otherwise in proportion to local elevation above sea-level. Climatic conditions similar

to those of Sind prevail in the plains and lower highlands, but in the upper highlands the seasons of the year are as well marked as in Europe. Owing to the proximity of the hills, the heat of the plains in summer is probably even greater than that of Jacobābād, where the mean temperature in July is 96°. 'O God, when thou hadst created Sibi and Dādhar, what object was there in conceiving hell?' says the native proverb. In this part of the country also the deadly simoom is not infrequent. During the short cold season, on the other hand, the climate is delightful. In the upper highlands the heat is never intense, the mean temperature at Quetta in July being only 79°. Except at Chaman, the diurnal range is highest in November. In winter the thermometer frequently sinks below freezing-point; snow falls and icy winds blow. The following table indicates the average temperature at places for which statistics are available. The figures for Jacobābād, which is in Sind but lies close to the border of Baluchistān, have been inserted as typical of the conditions in the Kachhi plain:—

	Height of Observatory above sea-level.	January.		May.		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
	Feet.								
Chaman .	4,311	43·2	18·1	79·6	27·7	88·3	26·6	57·6	24·5
Quetta . .	5,502	40·0	21·8	67·8	31·4	78·7	27·9	48·7	32·7
Jacobābād .	186	58·1	29·8	94·7	33·1	96·2	23·9	69·1	35·8

NOTE.—The diurnal range is the average difference between maximum and minimum temperature of each day.

The mountainous character of the country affects the direction and force of the winds. These partake largely of the character of draughts traversing the funnel-like valleys and finally striking the hills, where they empty the vapour that they carry. The north-west wind, known to the natives as *gorīch*, blows constantly. It is bitterly cold in winter and, in the west, scorching in summer. The west of Chāgai is subject to the effect of the wind so well-known in Persia as the *bād-i-sad-o-bīst-roz*, or '120 days' wind.'

Baluchistān lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shāhrig, which has the heaviest rainfall, can boast of no more than 11¾ inches in the year. In the highlands few places receive more than 10 inches, and in the plains the average amount is about 5 inches, decreasing in some cases to 3. The plains and the lower highlands receive their largest rainfall in the summer, and the upper highlands in the winter from the shallow storms advancing from the Persian plateau. In the former area the wettest month is July; in the latter February. The table on the next page shows,

for eight to twelve year periods ending in 1901, the average rainfall received at principal places:—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Chaman . .	1.48	1.78	1.18	0.51	0.11	0.07	0.11	...	..	0.03	0.35	1.08	6.70
Quetta . .	1.98	2.12	1.78	1.06	0.47	0.17	0.93	0.56	0.11	0.08	0.34	0.92	10.52
Sibi . .	0.53	0.32	0.27	0.09	0.29	0.32	1.26	1.19	0.24	...	0.14	0.51	5.16
Loralai . .	0.98	1.13	1.06	0.47	0.80	0.41	1.72	0.99	0.11	0.06	0.15	0.49	8.37
Fort Sandeman	0.62	1.04	1.57	0.78	0.71	0.98	2.49	1.15	0.07	0.05	0.25	0.30	10.01

The conformation of the surface of the country renders much damage from floods impossible, but the vast volumes of water which occasionally sweep down the river channels sometimes cause harm and loss of life. The floods are generally very sudden, and have been known to rise to a great height in the Nāri. The only known cyclone was that which visited Las Bela in June, 1902, destroying many cattle. Earthquakes are common everywhere and are frequently continuous. They sometimes cause much damage. A large earthquake crack has been traced for no less than 120 miles along the Khwāja Amrān and Sarlath ranges, and near this range of hills a disastrous earthquake occurred on December 20, 1892.

History.

One of the most striking facts in the history of Baluchistān is that, while many of the great conquerors of India have passed across her borders, they have left few permanent marks of their presence. Macedonian, Arab, Ghaznivid, Mongol, Mughal, Durrāni, all traversed the country, and occupied it to guard their lines of communication, but have bequeathed neither buildings nor other monument of their presence.

The earliest-known mention of part of Baluchistān is in the Avesta, the *Vara Pishin-anha* of which is undoubtedly identifiable with the valley of Pishīn. In the *Shāhnāma* we have an account of the conquest of Makrān by Kai Khusrū (Cyrus), and the Achaemenian empire which reached its farthest limits under Darius Hystaspes included the whole of the country. Among Greek authors Herodotus gives us little information about Baluchistān. He merely mentions Paktyake, which has been identified with the country of the Pakhtūns or Afghāns. It is to Strabo that we owe the best account, and from his writings we are able to identify the localities into which Baluchistān was distributed in ancient geography. On the north-east, and probably including all the upper highlands, was Arachosia; directly west of it was Drangiana; to the south lay Gedrosia; while in the Ichthyophagoi, Oraitai, and Arabies or Arabii are to be identified the fishermen of the Makrān

coast, the inhabitants of Las Bela, and the people of the Hab river valley respectively.

Alexander's retreat from India led him through Las Bela and Makrān, while a second division of his army under Craterus traversed the Mūla Pass, and a third coasted along the shore under Nearchus. Alexander's march and the sufferings of his troops are graphically described by Arrian. After Alexander's death, Baluchistān fell to Seleucus Nicator, and later on passed from his descendants to the Graeco-Bactrian kings who ruled also in Afghānistān and in the Punjab. Between 140 and 130 B.C., they were overthrown by a Central Asian horde, the Sakas, who passed along to the valley of the Helmand. About this time Buddhism, of which many traces are still to be found, flourished in Baluchistān. The empire of the Sassanians which followed expanded slowly towards the east, and Baluchistān was not conquered till the time of Nausherwān (A.D. 529–77).

Henceforth the suzerainty over the petty rulers of Baluchistān alternated between east and west. In the fourteenth year of the Hijra (635–6) Rai Chach marched from Sind and conquered Makrān. The Rai dynasty at the same time appear to have extended their dominions to the north towards Kandahār. The Arabs reached Makrān as early as the year 643. The parts of Baluchistān which subsequently became best known to them were Turān (the Jhalawān country), with its capital at Khuzdār, and Nūdha or Būdha (Kachhi). Their power lasted till towards the end of the tenth century; for when Ibn Haukal visited India for the second time about 976, he found an Arab governor residing in Kaikānān (probably the modern Nāl) and governing Khuzdār.

Shortly afterwards Baluchistān fell into the hands of Nasīr-ud-dīn Sabuktagīn; and his son, Mahmūd of Ghazni, was able to effect his conquests in Sind owing to his possession of Khuzdār. From the Ghaznivids it passed into the hands of the Ghorids and, a little later, was included in the dominion of Sultān Muhammad Khān of Khwārizm (Khiva) in 1219.

About 1223 a Mongol expedition under Chagatai, Chingiz Khān's son, penetrated as far as Makrān. A few years later Southern Baluchistān came under the rule of Sultān Altamsh of Delhi, but it appears soon to have reverted to the Mongols. The raids organized by Chingiz Khān have burned deep into the memory of Baluchistān. From Makrān to the Gomal, the Mongol (known to the people as the Mughal) and his atrocities are still a byword in every household.

Henceforth the history of Baluchistān centres round Kandahār; and it was from this direction that in 1398 Pīr Muhammad, the grandson of Tīmūr, was engaged in reducing the Afghāns of the Sulaimān mountains. Local tradition asserts that Tīmūr himself passed through the Marri

country during one of his Indian expeditions. The succeeding century is one of great historical interest. The Baloch extended their power to Kalāt, Kachhi, and the Punjab, and the wars took place between Mīr Chākar the Rind and Gwāhrām Lāshāri which are so celebrated in Baloch verse. In these wars a prominent part was played by Mīr Zunnūn Beg, Arghūn, who was governor of north-eastern Baluchistān under Sultān Husain Mirza of Herāt about 1470. At the same time the Brāhuis had been gradually gaining strength, and their little principality at this time extended through the Jhalawān country to Wad. The Arghūns shortly afterwards gave way before Bābar. From 1556 to 1595 the country was under the Safavid dynasty. Then it fell into the hands of the Mughals of Delhi until 1638, when it was again transferred to Persia.

We have an interesting account of Baluchistān in the *Ain-i-Akbari*. In 1590 the upper highlands were included in the *sarkār* of Kandahār, while Kachhi was part of the Bhakkar *sarkār* of the Multān *Sūbah*. Makrān alone remained independent under the Maliks, Buledais, and Gichkīs, until Nasīr Khan I of Kalāt brought it within his power during the eighteenth century.

From the middle of the seventeenth century Baluchistān remained under the Safavids till the rise of the Ghilzai power in 1708. The latter in its turn gave way before Nādir Shāh, who, during the first part of the eighteenth century, made several expeditions to or through Baluchistān. Ahmad Shāh Durrāni followed; and thenceforth the north-eastern part of the country, including almost all the areas now under direct administration, remained under the more or less nominal suzerainty of the Sadozais and Bārakzais till 1879, when Pishīn, Duki, and Sibi passed into British hands by the Treaty of Gandamak.

Meanwhile the whole of Western Baluchistān had been consolidated into an organized state under the Ahmadzai Khāns of Kalāt. All tradition asserts that the former rulers of Kalāt were Hindus, Sewā by name. As Muhammadan dynasties held Baluchistān from about the seventh century, we must look to an earlier period for the date of the Sewās; and it is not improbable that they were connected with the Rai dynasty of Sind, whose genealogical table includes two rulers named Sihras. The Mīrwāris, from whom the Ahmadzais are descended, claim Arab origin. In their earlier legends we find them living at Surāb near Kalāt, and extending their power thence in wars with the Jats or Jadgāls. They then fell under the power of the Mongols; but one of their chiefs, Mīr Hasan, regained the capital from the Mongol governor, and he and his successors held Kalāt for twelve generations till the rise of Mīr Ahmad in 1666–7. It is from Mīr Ahmad that the eponym Ahmadzai is derived.

Authentic history now begins, and the following is a list of the rulers, with approximate dates of their accession:—

1. Mīr Ahmad I, 1666–7.
2. Mīr Mehrāb, 1695–6.
3. Mīr Samandar, 1697–8.
4. Mīr Ahmad II, 1713–4.
5. Mīr Abdullah, 1715–6.
6. Mīr Muhabbat, 1730–1.
7. Mīr Muhammad Nasīr Khān I, 1750–1.
8. Mīr Mahmūd Khān I, 1793–4.
9. Mīr Mehrāb Khān, 1816–7.
10. Mīr Shāh Nawāz Khān, 1839.
11. Mīr Nasīr Khān II, 1840.
12. Mīr Khudādād Khān, 1857. From March, 1863, to May, 1864, the *masnad* was usurped by Khudādād Khān's cousin, Sherdil Khān.
13. Mīr Mahmūd Khān II, 1893. (The ruling Khān.)

The rulers of Kalāt were never fully independent. There was always, as there is still, a paramount power to whom they were subject. In the earliest times they were merely petty chiefs; later they bowed to the orders of the Mughal emperors of Delhi and to the rulers of Kandahār, and supplied men-at-arms on demand. Most peremptory orders from the Afghān rulers to their vassals of Kalāt are still extant, and the predominance of the Sadozais and Bārakzais was acknowledged so late as 1838. It was not until the time of Nasīr Khān I that the titles of *Beglar Begi* (Chief of Chiefs) and *Wāli-i-Kalāt* (Governor of Kalāt) were conferred on the Kalāt ruler by the Afghān kings.

Gibbon's description of the history of Oriental dynasties, as 'one unceasing round of valour, greatness, discord, degeneracy, and decay,' applies well to the Ahmadzais. For the first 150 years, up to the death of Mīr Mahmūd Khān I, a gradual extension of power took place and the building up of a constitution which, looking at the condition of the country, is a marvel of political sagacity and practical statesmanship. A period of social ferment, anarchy, and rebellion succeeded, in which sanguinary revolts rapidly alternated with the restoration of a power ruthless in retaliation, until at length the British Government was forced to interfere.

As the Mughal power decayed, the Ahmadzai chiefs found themselves freed in some degree from external interference. The first problem that presented itself was to secure mutual cohesion and co-operation in the loose tribal organization of the state, and this was effected by adopting a policy of parcelling out a portion of all conquests among the poverty-stricken highlanders. Thus all gained a vested interest in the welfare of the community, while receiving provision for their maintenance. A period of expansion then commenced. Mīr Ahmad made successive descents on the plains of Sibi. Mīr Samandar extended his raids to Zhob, Bori, and Thal-Chotiāli, and levied an annual sum of Rs. 40,000 from the Kalhoras of Sind. Mīr Abdullah, the greatest

conqueror of the dynasty, turned his attention westward to Makrān, while in the north-east he captured Pishīn and Shorāwak from the Ghilzai rulers of Kandahār. He was eventually slain in a fight with the Kalhoras at Jāndrihar near Sanni in Kachhi.

During the reign of Mīr Abdullah's successor, Mīr Muhabbat, Nādir Shāh rose to power; and the Ahmadzai ruler obtained through him in 1740 the cession of Kachhi, in compensation for the blood of Mīr Abdullah and the men who had fallen with him. The Brāhuis had now gained what highlanders must always covet, good cultivable lands; and, by the wisdom of Muhabbat Khān and of his brother Nasīr Khān, certain tracts were distributed among the tribesmen on the condition of finding so many men-at-arms for the Khān's body of irregular troops. At the same time much of the revenue-paying land was retained by the Khān for himself.

The forty-four years of the rule of Nasīr Khān I, known to the Brāhuis as 'The Great,' and the hero of their history, were years of strenuous administration and organization interspersed with military expeditions. He accompanied Ahmad Shāh in his expeditions to Persia and India, while at home he was continuously engaged in the reduction of Makrān, and, after nine expeditions to that country, he obtained from the Gichkīs the right to the collection of half the revenues. A wise and able administrator, Nasīr Khān was distinguished for his prudence, activity, and enterprise. He was essentially a warrior and a conqueror, and his spare time was spent in hunting. At the same time he was most attentive to religion, and enjoined on his people strict attention to the precepts of the Muhammadan law. His reign was free from those internecine conflicts of which the subsequent story of Kalāt offers so sad a record.

The reign of Nasīr Khān's successor, Mīr Mahmūd Khān, was distinguished by little except revolts. In 1810 Pottinger visited his capital and has left a full record of his experiences[1].

The reign of Mīr Mehrāb Khān was one long struggle with his chiefs, many of whom he murdered. He became dependent on men of the stamp of Mullā Muhammad Hasan and Saiyid Muhammad Sharīf, by whose treachery, at the beginning of the first Afghān War, Sir William Macnaghten and Sir Alexander Burnes were deceived into thinking that Mehrāb Khān was a traitor to the British; that he had induced the tribes to oppose the advance of the British army through the Bolān Pass; and that finally, when Sir Alexander Burnes was returning from a mission to Kalāt, he had caused a robbery to be committed on the party, in the course of which an agreement, which had been executed between the envoy and the Khān, was carried off. This view determined the diversion of Sir Thomas Willshire's brigade from Quetta to attack

[1] Henry Pottinger, *Travels in Beloochistan and Sinde* (1816).

Kalāt in 1839, an act which has been described by Malleson as 'more than a grave error, a crime[1].' The place was taken by assault and Mehrāb Khān was slain. Shāh Nawāz Khān was now appointed to succeed, with Lieutenant Loveday as Political officer. He was not, however, destined to occupy the *masnad* for long. In the year 1840 a rebellion of the Sarawān tribesmen caused his abdication, and Mīr Muhammad Hasan, afterwards known as Mīr Nasīr Khān II, was placed upon it.

By the efforts of Colonel Stacy, Mīr Nasīr Khān II was induced to submit to the British Government, and was installed by Major (afterwards Sir James) Outram at Kalāt in 1840. Nasīr Khān at first acknowledged Shāh Shujā as the paramount power in Baluchistān; but subsequent events in Kābul caused this undertaking to be annulled, and in 1854, as a consequence of the European imbroglio with Russia, a formal treaty, the first of those with Kalāt, was concluded with the British Government. Quarrels, which had meanwhile broken out between the Khān and the chiefs, led to Nasīr Khān raising a small body of mercenary troops, a measure which the chiefs naturally regarded as a serious encroachment on their powers.

Nasīr Khān II died, perhaps by poison, in 1857, and was succeeded by Khudādād Khān, then a mere boy. One of the first acts of the new ruler was to open fire with his guns on the chiefs who lay encamped near the city of Kalāt; and, from this time till 1876, the history of Kalāt contains little but one long chronicle of anarchy, revolt, and outrage, in which there were seven important and many minor rebellions. In March, 1863, through the machinations of Mullā Muhammad Raisāni, Sherdil, the Khān's cousin, attempted his assassination, but succeeded only in wounding him. A general insurrection ensued; Sherdil Khān was declared ruler and Khudādād Khān retired to the frontier. Mullā Muhammad now joined the other side, and the Khān regained the *masnad* in 1864. Revolt after revolt followed, until an attempt was made by the Commissioner in Sind to arbitrate between the parties in 1873. It proved abortive, and Major Harrison, the British Agent, was thereupon withdrawn and the Khān's subsidy was stopped.

At this juncture, Sir Robert (then Major) Sandeman appeared on the scene. His first mission to Kalāt in 1875 was not entirely successful; and, immediately after its departure from the capital, Nūr-ud-dīn, the Mengal chief, with many of his followers, was slain by the Khan owing, it was alleged, to a plot against the latter's life. But a few months later Major Sandeman was again on the spot, accompanied by a large escort. By his tact and firmness the Mastung agreement, the Magna Charta of the Brāhui confederacy, was drawn up on July 13, 1875, and read out

[1] Malleson, *History of Afghanistan* (1878).

formally in Darbār. An account of its provisions is given below in the section on Native States (p. 319).

To make the influence which had been thus acquired effective for the future, the British Government now accepted the responsibility, as the paramount power, of preserving the peace of the country, and a fresh treaty was concluded with the Khān in December, 1876. In the following year Sir Robert Sandeman was appointed Agent to the Governor-General, and Quetta was permanently occupied.

The rest of the story of Kalāt is soon told. During Sir Robert Sandeman's lifetime, no serious revolts occurred; and, in spite of the waywardness of Khudādād Khān, he was always treated by the Agent to the Governor-General with the greatest courtesy and consideration. In March, 1893, the *mustaufi* or chief accountant, with his father, his son, and a follower, were murdered by the Khān's orders. The Khān appears to have suspected the *mustaufi* of treachery, and alleged that the latter had made an attempt on his life. Khudādād Khān's abdication was subsequently accepted by the Government of India in favour of his son, Mīr Mahmūd, the present Khān. Mīr Khudādād Khān was shortly afterwards removed with his second and third sons to Loralai, and is now living in Pishīn.

The reign of the present Khān has been distinguished by few events of importance. In 1897 the wave of unrest, which passed down the frontier, made itself felt in Baluchistān, where a movement among the Sarawān chiefs, which might have had serious consequences, was averted by the arrest and imprisonment of two of the ringleaders. In the same year an outbreak occurred in Makrān, and British troops engaged the Makrān rebels at Gokprosh in January, 1898, the ringleader with many of his followers being slain. Another outbreak occurred in Makrān in 1901, which was also put down by British troops by the capture of Nodiz fort.

Little need be said here of the history of Las Bela. Although nominally subject to Kalāt, whose ruler could call on it for an armed force when required, and claimed the right of control over the amount of the dues levied on goods in transit from Sonmiāni, its chiefs (Jāms) have always asserted and maintained a greater or less degree of independence, their position being strengthened by matrimonial alliances with the Khāns of Kalāt. Since the advent of the British the bond of connexion between the two States has been almost entirely severed.

The political connexion of the British Government with Baluchistān commences from the outbreak of the first Afghān War in 1839, when it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachhi, Quetta, and Mastung were handed over to Shāh Shujā-ul-mulk, and Political officers were appointed to administer the country and

organize a system of intelligence. Continual trouble occurred with the tribes in Kachhi; and in 1840 Kahān, in the Marri hills, was occupied by Captain Lewis Brown. Here he was besieged for five months by the Marris, who defeated a relieving force under Major Clibborn. In the meantime the garrison at Quetta was attacked by the neighbouring tribes, and was also invested by the insurgents, who had raised Nasīr Khān II of Kalāt to the *masnad*. On the retreat of this gathering to Dādhar and its defeat by a British force, Lieutenant Loveday, the Assistant Political Agent at Kalāt, was murdered. The year 1841 opened auspiciously, but closed with the disaster at Kābul, an event which reacted on the Baluchistān tribesmen. Fortunately the country was in charge of a man of brilliant abilities, Sir James Outram; and all remained quiet while General England's column was pushed up the Bolān Pass to Quetta at the beginning of 1842, only to be defeated in the unfortunate affair of Haikalzai in Pishīn. Then began the withdrawal from Afghānistān; the districts which had been assigned to Shāh Shujā were handed over to the Khān of Kalāt, and Quetta was finally evacuated in October.

In 1845 General Sir Charles Napier led a force of 7,000 men against the Bugtis; but in spite of the assistance given by their enemies, the Marris, the operations were only a qualified success. The charge of the Upper Sind Frontier and of Baluchistān devolved on Captain (afterwards General) John Jacob from the beginning of 1847, and he held it till his death in 1858. Jacob's indefatigable energy and military frontier methods belong to the history of Sind rather than of Baluchistān; but his influence in Kalāt was very great, and it was he who negotiated the first treaty with that State in 1854. From 1856 to 1873 Political Agents were deputed to Kalāt, who were subordinate to the Political Superintendent in Upper Sind.

The founder of the Baluchistān Province as it now exists was Sir Robert Sandeman, who gave his name to a policy which has been aptly described as humane, sympathetic, and civilizing. Sandeman was the first to break down the close border system and to realize that the Baloch and Brāhui chiefs, with their interests and influence, were a powerful factor for good. His policy, in short, was one of conciliatory intervention, tempered with lucrative employment and light taxation.

Captain Sandeman, as he then was, first came into contact with the Marris and Bugtis as Deputy-Commissioner of Dera Ghāzi Khān in 1867; and, in consequence of the relations he then established and of his successful dealings with these subjects of the Khān of Kalāt, he was invited to take part in the Mithankot conference, which was held in February, 1871, between the representatives of the Governments of the Punjab and Sind. The result of this conference was to place Sandeman, in his relations with the Marris and the Bugtis, under the Political

Superintendent of the Upper Sind Frontier, and to cause the extension of the system of employing tribal horsemen, with the object of maintaining friendly communications with the tribes. Shortly afterwards matters in Kalāt went from bad to worse; the missions of 1875 and 1876 already referred to took place, and Baluchistān became a separate Agency directly under the Governor-General.

The importance of the position which had been acquired on the frontier was soon to be illustrated. At the end of 1878, the second Afghān War broke out, and troops were hurried forward to Kandahār along a line of communication which Sandeman's policy had rendered absolutely safe. At the close of the first phase of the war Sir Robert Sandeman accompanied General Biddulph's column, which had been deputed to open up the country between Pishīn and Dera Ghāzi Khān. At Baghao an engagement took place with the Zhob and Bori Kākars under Shāh Jahān, Jogezai, in which they were defeated. By the Treaty of Gandamak (May, 1879), Pishīn, Sibi, Harnai, and Thal-Chotiāli were handed over by Yakūb Khān to the British Government, on condition that the Amīr should receive the surplus revenues after payment of the expenses of administration. This treaty was afterwards abrogated by the massacre of the British Resident and his escort at Kābul and the deposition of Yakūb Khān. Then followed the second phase of the war and the British defeat at Maiwand in July, 1880. As a result of the renewal of military operations, some of the Afghān tribes within the Agency became restive and had to be subdued. An outbreak, too, occurred among the Marris, which was put down by a small expedition. At the close of the war the retention of the areas ceded by the Treaty of Gandamak was decided on, at Sir Robert Sandeman's strenuous instance.

The ten years succeeding 1882 were years of administrative and organizing activity. Arrangements were commenced for the proper collection of the land revenue, irrigation schemes received attention, dispensaries were started, forests developed, and communications opened out in every direction. The strategical importance, too, of the western and north-eastern portions of the Province was fully realized. Two expeditions were made to Makrān: the first in 1883–4, during which the disputes between the Nausherwānis and the Khān of Kalāt were settled; and the second in 1890–1, when the question of the better administration of Makrān was taken up. On the north-east an expedition was made against the Zhob Kākars in 1884, which resulted in their submission. In 1886 Bori was taken over and the cantonment of Loralai founded. In 1887 the status of the Agent to the Governor-General was raised from that of a Resident of the second class to that of a Resident of the first class; the assigned districts were declared to be British territory, and the Agent to the Governor-General was appointed Chief Commissioner

for them. The year 1889 saw an expedition to the Gomal through Zhob, when the district was occupied and the station of Fort Sandeman selected. At the end of 1890 another expedition took place under the command of Sir George White, the object being the punishment of two of the Zhob chiefs who had been raiding the Zhob valley, and the chastisement of the Khidarzai section of the Largha Shirānis. The chiefs were not captured, but the Shirāni country was occupied without opposition. The position thus taken up enabled the Gomal to be effectively flanked, and the Shirānis and other tribes of the Takht-i-Sulaimān to be brought under control. Sir Robert Sandeman died at Bela in January, 1892, universally mourned.

He was succeeded by General Sir James Browne, who died in 1896. A period of consolidation and demarcation followed. Nushki was permanently leased in 1899; and in 1903 the lands irrigated by the Sind canals, now known as the Nasīrābād *tahsīl*, were acquired from Kalāt on a perpetual lease. In the same year the Political Agent was withdrawn from Southern Baluchistān, and Las Bela was placed under the Political Agent of Kalāt; the Loralai District was formed by taking parts of the Zhob and the Thal-Chotiāli Districts, and the name of the latter was changed to Sibi. Thus, in a little more than a quarter of a century, security has replaced anarchy, and peace and plenty prevail now in tracts formerly given over to bloodshed and perpetual poverty.

Baluchistān offers a virgin field to the archaeologist, and one which is not altogether unpromising. Throughout the country curious mounds occur, now deserted, but generally covered with masses of broken pottery, which will probably some day afford good ground for excavation. When the site of the present arsenal at Quetta was being prepared, a statuette of Hercules was discovered. Mounds opened at Nāl and Māmātāwa in the Jhalawān country have yielded interesting finds of pottery. That found at the former place possesses striking resemblances to pottery of the eighth century B.C. found in Cyprus and Phoenicia and of Mycenaean technique. At Hinidān in the valley of the Hab river, at Sūrāb in the Jhalawān country, and in Las Bela highly ornamented tombs of unknown origin are to be seen, which afford evidence of a system of superterrene burial. The *gabrbands*, or embankments of the fire-worshippers, which are common throughout the Jhalawān country, are also of considerable interest, while some of the underground water-channels, both round Quetta and near Turbat in Makrān, indicate the possession of scientific skill entirely unknown at the present day. North of Bela lies the curious cave-city of Gondrāni, the cave-dwellings being hewn out of the conglomerate rock. At Chhalgari in Kachhi are indications of interesting Buddhist remains. Such finds of coins as have been made from time to time render it clear that all sorts of traders, from ancient times to the present, have left traces of them-

selves along the routes leading from Persia to India. Near Dabar Kot in the Loralai District coins of the time of the Caliph Marwān II, struck at Balkh in the year of the Hijra 128 (A.D. 745), have been unearthed; and at Khuzdār in the Jhalawān country Ghaznivid coins of interest have been picked up, chiefly of Ibrāhīm (1059–99) and Bahrām Shāh (1118–52). The Koh-i-Taftān, which, though not actually in Baluchistān, is close to the western border, has yielded a find of considerable value in the shape of Indo-Scythian coins, some of which are now deposited in the British Museum. Punch-marked coins have been discovered in Zhob, and coins of the Shāhis of Kābul in Khārān.

Population.

Although an attempt was made to obtain a rough enumeration of the population of some parts of Administered areas in 1891, it was not until 1901 that any systematic census was carried out. This Census extended over 81,632 square miles, but omitted Makrān, Khārān, and Western Sinjrāni. In the towns and certain other selected places a synchronous enumeration took place, but elsewhere estimates only were made. The accuracy of the available figures is not therefore absolute. The total population amounted to 810,746 persons. According to a careful estimate made in 1903, the population of Makrān amounts to about 78,000, and a similar estimate puts the population of Khārān at 19,600. That of Western Sinjrāni may be reckoned at about 6,000. The total population of the Province is, therefore, about 915,000 persons. Areas directly administered have an area of 46,692 square miles and an estimated population of 349,187, of whom 343,187 were actually enumerated. The population of the Native States and of the Marri and Bugti tribal areas (85,163 square miles) is estimated at 565,400, of whom 467,559 were counted at the Census. Detailed figures for the different localities will be found in Table I at the end of this article.

The density of population in the area covered by the Census amounts to less than ten persons per square mile. Including the areas for which estimates have now been obtained, the density falls to seven persons per square mile. The highest density is to be found in Quetta-Pishīn, with its large urban population and well-irrigated tracts, which possesses twenty-two persons to the square mile. In Chāgai, on the other hand, only one person per square mile is to be found. The number of persons per house in 1901 was 4·54.

About 95 per cent. of the total population enumerated dwelt in rural areas. No inducement exists in Baluchistān for the indigenous inhabitants to collect into towns, and a tendency is apparent among the people to avoid living together in large communities. This accounts for the paucity of towns, of which there are only six. All of them had garrisons in 1903, with the exception of Sibi and Pishīn, and they have

sprung up since the British occupation. They contain a population almost entirely alien, which has accompanied the new rulers, either in service or for purposes of trade. Striking evidence of this is afforded by the fact that only 158 per 1,000 of the persons living in towns speak vernaculars of Baluchistān. Similarly, the villages are not only few in number (2,813, or one for every 47 square miles), but their size is small, and most of them contain less than 500 inhabitants. They are, as a rule, mere collections of mud huts, which are evacuated in summer when the cultivators encamp near their fields in blanket tents. The prevalence of the nomadic habit, to which reference will be made later, is one of the most remarkable features in the population. One of its results is that throughout the country small detachments, each of some half-dozen households, live together, owning cattle, sheep, and goats, and moving from place to place for pasturage.

Owing to the doubtful accuracy of the figures obtained by the Census of 1891, no reliable comparative statistics exist by which the increase in the population can be gauged. The Census of 1901 showed an increase in some rural areas of 45 per cent., but part of this is probably due to better methods of enumeration. When we consider, however, that previous to 1876 the condition of affairs represented the 'ebb and flow of might, right, possession, and spoliation,' there can be little doubt that the increase of population since the British occupation has been considerable. In Quetta town, where the figures are reliable, an increase of 20 per cent. occurred in the decade.

The figures of migration in the *Report on the Census of India*, 1901, show a net loss to Baluchistān of 35,986 persons, the total of emigrants enumerated in India outside Baluchistān being 70,267 against 34,281 immigrants. Migration to and from Baluchistān is of two kinds: periodic and temporary. Nearly all the highland population of the country take part in the periodic migration—towards the plains in the autumn and towards the highlands in the spring. A distinction is observable between the migrations of the Afghāns and the Brāhuis. The Afghāns move far afield, and their object is generally commerce, the transport trade, or search for work as labourers. The Brāhuis, on the other hand, move in a more limited circle; few of them care for commerce, while such transport as they do is confined to short distances. The work in which they particularly engage is harvesting and fuel-carrying. Many of them spend nearly the whole of the year in harvesting. In October and November they cut the rice in Sind; this is followed by the *jowār*, and later by the spring wheat and barley. Then the heat drives them upwards until the highlands are reached in June. July and August are the Brāhui's months of rest, and in September he starts downwards again.

Temporary emigration is confined chiefly to Afghāns and Makrānis.

The former roam all over India, and even make their way so far afield as Chinese-Turkistān and Australia. Makrānis make good workmen, and leave their homes in search of labour. This temporary emigration is compensated by the large immigration. The immigrants constitute the security, the motive force, and the brains of the country. They are soldiers, clerks, merchants, and artisans; but few of them settle permanently in Baluchistān, a fact sufficiently indicated by the very small proportion of women (18 per cent.) who are found among them. The majority of them are drawn from the Punjab, the United Provinces, and Sind.

No detailed record of age was attempted in 1901, but adults were distinguished from minors during the enumeration. It was found that in 100,000 males there were 66,053 adults and 33,947 children, while in 100,000 females there were 64,352 adults and 35,648 children. Children are thus proportionately less in number, and adults more numerous, than in India. In the towns and other places where the regular schedule was used, a synchronous statement of the ages of the normal population divided into age-periods indicates that the alien population in Baluchistān varies largely from the normal. Normal figures must naturally show a decreasing series of numbers at each age; but in Baluchistān, owing to the large alien population, the figures gradually rise till the maximum is reached in the case of males between twenty-five and thirty, and in the case of females between twenty and twenty-five.

Longevity among the indigenous tribesmen appears to be infrequent. Exposure, bad nutrition, hunger, and sickness affect the age of the population; and the principle of survival of the fittest must necessarily prevail among an uncivilized people such as is found in Baluchistān. A member of a tribe whose usefulness is affected by disease becomes a social outcast depending for his subsistence on charity; and when in hard times these sources are dried up, the impaired constitution quickly sinks. Of infirmities, blindness is common, probably owing to the dry and dusty climate, malnutrition, and excessive grain diet. Leprosy does not appear to be endemic, and insanity is rare. Infant mortality is undoubtedly high, owing to the unhealthy surroundings, want of proper nourishment, and exposure with which infant life has to contend.

The disproportion of the sexes in the towns in 1901 was very great, there being only 260 women to every 1,000 men. The excess is greater in winter than in summer, as many women leave for their homes in India to avoid the former season. Among the indigenous population, numbering 762,039, a total deficiency in females of 50,901 was indicated, and this deficiency was uniform in Districts, tribes, and groups of different religious denominations. In every 1,000 Afghāns there

were found to be 540 males and 460 females; among the Baloch the figures were 552 males to 448 females, and among Brāhuis 523 males to 477 females. The highest proportion of females is thus to be found among the Brāhuis and the lowest among the Baloch. That these figures are not far from the truth is indicated by the comparatively high bride-price paid by Afghāns, reaching Rs. 400 to Rs. 500, while among the Brāhuis it is much lower.

Every tribesman marries as soon as he possibly can, but the payment of bride-price frequently makes bachelorhood compulsory till middle age. Polygamy is desired by all, but attained by few. As a rule, marriage among the Muhammadan population does not take place till puberty. Some of the Kākar Afghāns have a curious custom permitting cohabitation after betrothal. A Brāhui or Baloch will always endeavour to marry a first cousin. The Afghāns, on the other hand, give their daughters to the highest bidder without regard to relationship. Among both Afghāns and Brāhuis a widow passes to the deceased husband's brother. Divorce, though a simple process, is infrequent. Adultery is punished among Baloch and Brāhuis by the death of the parties, but Afghāns will generally salve their honour for a consideration in money or kind. In the area under a regular census, where, however, conditions are wholly anomalous, there were in 1901, 4,632 unmarried, 4,839 married, and 529 widowers among 10,000 males; while among 10,000 females 3,539 were unmarried, 5,626 were married, and 835 were widowed. As might be expected in a population which is largely Musalmān, the proportion of widows is less than in India proper. The marriage of children at an early age is much less common, among both Hindus and Muhammadans, than in the neighbouring Province of the Punjab. Of Hindus more than twice as many are married under fifteen years than of Muhammadans.

The indigenous languages prevailing in Baluchistān are Pashtū, Brāhuī, Eastern and Western Baluchī, Jatkī or Siraikī, Jadgālī or Sindhī, Khetrānī, and Lāsī. The Dehwārs of Kalāt and Mastung speak Dehwārī, a kind of bastard Persian. The Loris or minstrels and blacksmiths have a curious jargon called Mokakī. The language of correspondence is Persian. Of Indian vernaculars spoken in 1901 in the areas where the standard schedule was used, Punjābi was the most common with 20,263 speakers. Urdū came next with 9,331, and then Sindī with 3,305. There were 3,584 English-speaking persons.

Generally speaking, Pashtū is spoken throughout the country lying eastward of a line drawn from Sāngān near Sibi to Chaman. In the south-eastern corner of Loralai, Khetrānī, a dialect of Lahnda or Western Punjābi, is prevalent. In the Marri-Bugti country and in parts of Kachhi, Eastern Baluchī occurs. The cultivators of the last-named area speak both Jatkī and Jadgālī, the latter language being more

widely spoken and being also prevalent in Las Bela. Brāhuī is spoken throughout the Sarawān and Jhalawān countries, but only extends up to about the 66th parallel of longitude, where it meets Western Baluchī. Affinity of race is no criterion of language. All Afghāns do not speak Pashtū, nor do all Brāhuis speak Brāhuī. Sometimes one section of a tribe talks Brāhuī and another Baluchī.

Of the principal indigenous languages, Pashtū and Baluchī belong to the Indo-Aryan family, while Brāhuī has been placed by the latest inquirer, Dr. Grierson, among the Dravidian languages. Baluchī has two main dialects, Eastern and Western. Western Baluchī, also called Makrānī, is more largely impregnated with Persian words and expressions than the Eastern dialect. A considerable body of literature has sprung up in this language. The soft southern dialect of Pashtū, as distinguished from the Pakhtū or northern dialect, is alone spoken in Baluchistān. Popular literature is entirely oral, commemorating events of local importance and relating stories of love and war. An account of Brāhuī and its speakers will be found elsewhere (*see* BRĀHUIS).

The Meds, the Afghāns, and the Jats appear to have been the inhabitants of Baluchistān at the time of the Arab invasions. The Meds now, as then, live on the coast. The Afghāns still cluster round their homes at the back of the Tahkt-i-Sulaimān. The Jats, in spite of the influx of Brāhui and Baloch, to this day compose the cultivating classes of Las Bela and Kachhi; and some of the Kūrks, whose insolence led to the final subjugation of Sind by the Arabs, are still to be found in the Jau valley in the Jhalawān country. The indigenous races of chief importance at the present day are the Afghāns, Baloch, Brāhuis, and Lāsis. The Jat cultivators now form only a small minority; but many of them have undoubtedly been absorbed by the Baloch and Brāhuis. Among religious and occupational groups may be mentioned Saiyids, Dehwārs, and the indigenous Hindus who live under the protection of the tribesmen and carry on the trade of the country. The Afghāns, Baloch, and Brāhuis have been determined by Mr. Risley to be Turko-Irānians. Their stature is above the mean; complexion fair; eyes dark but occasionally grey; hair on face plentiful; their heads are broad and their noses of great length. The Baloch hold the Marri and Bugti hills, and parts of Kachhi, where they mingle with the Jats. The Brāhuis occupy the great mountain band between Quetta and Las Bela, and in Las Bela we again have Jats called Lāsis. In Makrān many mixed races occur, which may be divided into two principal groups: the dominant races forming a small minority, and the races of aboriginal type known as Baloch, Darzādahs, &c. In the north-west of the Province the Baloch occur again, while in Nushki and the north-east of Khārān Brāhuis are numerous. In the area where a regular census was taken in 1901, Brāhuis were found to be the strongest race,

numbering 292,879. Afghāns came next with 199,457, and, after a considerable drop, Baloch with 80,552. Jats numbered 66,746, and Lāsis 37,158. The numerical predominance of the Afghāns and the insignificance of the Baloch are worthy of remark.

The Afghāns, or Pashtūns as they describe themselves, appear to have been living not far from their present abode in the time of Herodotus, if the identification of his Paktyake with Pakhtūns be accepted. Cunningham considers that they are also identifiable with the Opokien of Hiuen Tsiang in the seventh century. At the beginning of the eleventh century they had already spread southwards as far as Multān, for Mahmūd of Ghazni attacked them there. Subsequently two of their tribes, the Lodī and Sūri, gave rulers to the throne of Delhi. But while scattered groups pushed out east and west to seek power and even empire, the nucleus of the race still remained in its ancient haunts; and to this day we find its elder representatives clustering round the Takht-i-Sulaimān, while others have made their way south to Sibi and as far north as Dīr, Swāt, and Bājaur. According to the Afghān genealogies, Kais Abdur Rashīd, the thirty-seventh in descent from Malik Tālūt (King Saul), had three sons, Gurgusht, Saraban, and Baitan. Among the descendants of Gurgusht we have Mando Khels, Bābis, Kākars, and Panis; the Saraban division is represented by the Tarīns, Shirānis, Miānis, and Barech; the descendants of Baitan can be identified in the Baitanis living across the Gomal. The most numerous and important indigenous Afghān tribes in Baluchistān are the Kākar (105,444), Tarīn (37,906), Pani (20,682), and Shirāni (7,309). The Kākárs are to be found in largest numbers in the Zhob, Quetta-Pishīn, and Loralai Districts. The Tarīns have two main branches, the Spīn Tarīn and Tor Tarīn, of whom the former live in the Loralai and Sibi Districts and the latter in the Sibi and Quetta-Pishīn Districts. The Panis include both the Mūsā Khels of Zhob and the Panis of Sibi. The Shirānis live in close proximity to the Takht-i-Sulaimān. Of their two divisions, the Bargha, or upper Shirānis, alone occupy territory in Baluchistān. Numerous Ghilzais, nearly all of whom are nomads, occupy the country to the south of the Gomal river in winter. They are labourers, traders, and expert *kārez* diggers.

Baloch tradition indicates Aleppo as their country of origin. The latest inquirer arrives at the conclusion that they are Irānians[1]. The word *Baloch* means 'nomads' or 'wanderers,' and is coupled by Ibn Haukal and others with the word *Koch*. Whatever their original habitat, the Baloch had taken up a position in close proximity to Makrān early in the seventh century, and to this day many of their tribal names bear the impress of the localities which they occupied in

[1] M. L. Dames, *The Baloch Race* (1904).

Persian Baluchistān. Hence they made their way eastward until in the fifteenth century we find them settled in Kachhi. The tribes of importance are the Marris, the Bugtis, the Buledis, the Magassis, and the Rinds. Of these, the Rinds and Magassis have been enrolled in the ranks of the Brāhui confederacy; but the Marris and Bugtis appear, even in the palmiest days of the Ahmadzai rulers, to have been more or less independent.

Except in South-Western Baluchistān, where no tribal system appears to exist, Afghāns, Baloch, and Brāhuis are all organized into tribes, each having a multitude of subdivisions, clans, sections, and subsections. There is a distinction, however, between the constitution of an Afghān tribe and that of a Brāhui or Baloch tribe. Among the former the feeling of kinship is a bond of union far stronger than among the latter, with whom common blood-feud forms the connecting link. Theoretically, an Afghān tribe is constituted from a number of kindred groups of agnates; in a few cases only are small attached groups to be found which are not descended from the common ancestor. On the other hand, the Brāhui or Baloch tribe is a political entity, composed of units of separate origin, clustering round a head group known as the *Sardār Khel*. It is recruited on a definite system: a new-comer first shares in the good and ill of the tribe; later he obtains a vested interest in the tribal welfare by receiving a portion of the tribal lands; and his admission is sealed with blood by the gift of a woman in marriage. The tribe is organized and officered expressly for offence under an hereditary chief and headmen of groups. Among Afghāns the leader does not necessarily hold by heredity, for the individual has great scope for asserting himself; once, however, he has gained a position, it is not difficult for him to maintain it, provided he receives external support, and this is largely the secret of the Sandeman policy.

The Afghāns are tall, robust, active, and well formed. Their strongly marked features and heavy eyebrows give their faces a somewhat savage expression. The complexion is ruddy; the beard is usually worn short, as also is the hair. Their general bearing is resolute, almost proud. Courage is with them the first of virtues, but they are cruel, coarse, and pitiless. Vengeance is a passion. Their cupidity and avarice are extreme. The Baloch presents a strong contrast to his Afghān neighbour. His build is shorter, and he is more spare and wiry. He has a bold bearing, frank manners, and is fairly truthful. He looks on courage as the highest virtue, and on hospitality as a sacred duty. He is an expert rider. His face is long and oval, and the nose aquiline. The hair is worn long, usually in oily curls, and cleanliness is considered a mark of effeminacy. A Baloch usually carries a sword, knife, and shield. He rides to the combat but fights on foot. Unlike the Afghān, he is seldom a religious bigot.

Out of 810,746 persons enumerated in 1901, 765,368 were Muhammadans, 38,158 Hindus, 4,026 Christians, 2,972 Sikhs, and 222 'others.' In 100,000 of the population there were thus 94,403 Muhammadans, 4,706 Hindus, 497 Christians, 367 Sikhs, and 27 persons of other denominations. Of the total Christian population, 3,477 were Europeans, 124 Eurasians, and 425 natives. Members of the Anglican communion were most numerous, numbering 2,857.

Islām and Hinduism are the only indigenous religions. The spread of Islām in Baluchistān probably occurred very early in the Muhammadan era. In practice, animistic beliefs and superstition rather than orthodox Muhammadanism prevail, and there is general ignorance of the tenets of the faith. Although the Baloch and Brāhuis are now professed Sunnis, there are indications that they have been much influenced by Shiah doctrines. Of sects, the Zikris or Dais of Makrān are the most interesting. They are the followers of a *Māhdi*, who is stated to have come from Jaunpur in India, and they believe that the dispensation of the Prophet Muhammad is at an end. While denying many of the doctrines of Islām, they have imitated others. They have constituted their Kaaba at Koh-i-Murād near Turbat, and thither all good Zikris repair on pilgrimage in the month of Zil Hij. They are very priest-ridden, and believe their *mullās* to be endowed with miraculous powers. At the same time their alleged incestuous practices appear to have been much exaggerated by their critics. They include nearly half the population of Makrān. The Taibs ('penitents') of the Kachhi are another small but curious sect.

Hinduism has been modified by its Musalmān surroundings. Hindus have little or no compunction in drinking from Musalmān water-skins, and some of them keep Musalmān dependants for domestic service. The Rāmzais of the Loralai District afford a curious example of the assimilation by Hindus of Baloch dress and customs.

Christian missions are endeavouring to gain a footing by giving medical aid and education. Branches of the Church Missionary Society and of the Church of England Zanāna Mission have been opened at Quetta. The Province forms part of the Anglican diocese of Lahore and of the Roman Catholic arch-diocese of Bombay.

The majority of the indigenous population are dependent for their livelihood on agriculture, the provision and care of animals, and transport. An Afghān and a Baloch, as a rule, cultivates his own land. The Brāhuis dislike agriculture, and prefer a pastoral life. Their lands are, therefore, cultivated through tenants who belong to professional agricultural groups. A reminiscence of the slavery which existed in the country before British occupation is to be found in a population of servile origin numbering 22,304 in 1901. These servile dependants are happy and contented, and cases of ill-treatment seldom occur. Women

take a large part in all occupations. Not only have they ordinary household duties to perform, but they take the flocks to graze, groom their husband's horse, and assist in cultivation. When a husband dies, his widow is looked on as a valuable asset in the division of his property, owing to the custom of demanding bride-price.

Meals are generally taken twice, at midday and in the evening. Flesh, milk, which is highly prized, and cheese in various forms, with wheaten or *jowār* bread, are the chief constituents. In the highlands a kind of 'biltong' is prepared in the winter from well-fattened sheep, and is much relished. Onions, garlic, and fresh asafoetida stalks are most used as vegetables. On the coast rice and fish are eaten, while in Makrān dates and dried fish form the staple diet of the people. Brāhuis and Baloch never condescend to eat with their women folk.

The Afghān wears a loose tunic, baggy drawers, a sheet or blanket, sandals, and a felt overcoat with the sleeves hanging loose. His women wear a loose scarlet or dark-blue shift, with or without wide drawers, and a wrapper over the head. The Baloch wears a smock reaching to his heels and pleated at the waist, loose drawers, and a long cotton scarf. His headdress is wound in rolls round his head, generally over a small skull-cap. The colour must be white, or as near it as dirt will allow. His wife's clothes resemble those of Afghān women, but must be red or white.

Mat huts and black blanket tents stretched on poles are the characteristic dwellings of the country. They are of various dimensions, some being as much as 50 feet long by 10 feet broad. They are generally about 4 feet high. The walls are of matting, home-spun blankets, or stones laid in mud. The dwelling is partitioned in the centre by a hurdle, on one side of which live the family and on the other the flocks and herds. At the back of the human dwelling are piled the felts and quilts used for bedding. The remainder of the furniture consists of a wooden bowl or two, an earthen pot, a flat stone griddle for baking, and a few skins for water and grain. Permanent dwellings are numerous only in those parts where they are required for protection from the climate, or where there is much cultivation. The house of a well-to-do person generally consists of a courtyard with three rooms in a line. They always face east or south, and consist of a storehouse, a winter room, and a summer room. Outside, in the courtyard, are a kitchen and a stable for cattle. Sometimes the houses are double-storeyed, the lower part being used as a storeroom. Cultivators of the poorer class merely have two rooms without a courtyard. In the plains an open shelter, roofed with brushwood and supported on posts, is used in summer. In Las Bela a peculiarity of the houses is the wooden framework, generally of tamarisk; there are no windows, but light and air are admitted through a windsail in the roof.

The usual Muhammadan mode of burial is in vogue. The aperture of the grave is narrow at the top but broader near the bottom. In some parts a corpse is never taken out through the door of the house, but the mat wall is broken down for purposes of removal. If a person dies far from home, the body is sometimes temporarily interred pending removal to its native place.

Field sports are the usual amusements of the people. They indulge in racing, shooting, coursing, and tent-pegging. Indoor recreations among the Brāhuis and Baloch include singing, dancing, and a kind of draughts. The Afghāns are fond of marbles, prisoner's base, quoits played with a circular stone, and a game like hunt-the-slipper. Ram- and cock-fighting are much admired, but their chief delight is in dancing. Some ten or twenty men or women stand in a circle, with a musician in the centre, and the dancers execute a number of figures, shouting, clapping their hands, and snapping their fingers. Wrestling after the European fashion is common among the Afghāns and Jats. Brāhuis are fond of trying their strength by lifting weights. Egg-fighting is also of frequent occurrence.

Fairs are held throughout the country on the occasion of the Muhammadan festivals of Id-ul-Fitr and the Id-uz-Zuha, when general rejoicings take place. Shrines are common and are constantly visited. The best-known places of pilgrimage are Hinglāj and Shāh Bilāwal in Las Bela, and Pīr Lākha Lahrāni in Kachhi.

Among Brāhuis and Baloch, children are named on the sixth night after birth; among Afghāns, on the third day. Boys are named after the Prophet, according to the Muhammadan custom. The Brāhuis borrow names from trees, plants, animals, &c. The word Khān is frequently added, out of courtesy, to the names of men of good birth, and Bībī, Nāz, Bāno, Bakht, Gul, Khātūn to those of women; a native gentleman prefixes Mīr, thus: Mīr Yūsuf Khān. The first child usually receives the name of the grandmother or grandfather as the case may be, a practice which causes much confusion. In stating his name a man will generally add the name of his tribe (*kaum*), and if questioned farther, will always give his section and sub-section also. The sectional name is formed by adding the suffix *khel* or *zai* to an eponym for Afghāns, *zai* and *āni* for Brāhuis, and *āni* for Baloch, thus: Sanzar Khel, Ahmadzai, Aliāni. Permanent villages are usually named after individuals, with the addition of *kili*, *kot* or *got*, *kalāt*, or *shahr*. An encampment is called *halk* or *khalk*.

Agriculture.

Agriculture, camel-driving, and flock-owning constitute the occupations on which the majority of the population depend. The proportion of agriculturists to flock-owners is probably about three to one. In many cases both agriculture and pasture are combined. Previous to the advent of the British, life and

property were so insecure that the cultivator deemed himself fortunate if he reaped his harvest; the fastnesses of the hills, on the other hand, afforded shelter and safety to the herdsman. The spread of peace and security has been accompanied by a marked extension of agriculture, which accounts for the increase in numbers of the purely cultivating classes, such as Lāngavs, Dehwārs, and Dehkāns. Some tribes are still almost entirely pastoral, including the Marris and Bugtis; the Sulaimān Khel, Nāsir, and other Afghāns; and many Brāhuis.

The cultivable area of the country in comparison with the total area is necessarily small; for, with the exception of the plains of Kachhi, Las Bela, and the Dasht in Makrān, cultivation is confined to the limited area lying in the centre of the valleys between the mountains. Here there is generally a fringe of permanently irrigated land cut up into small polygons, while towards the hills lie larger fields surrounded by embankments three or four feet high, by which the rainfall is caught as it descends from the gravel slopes bordering the valleys. In the centre are sometimes found bright red clays, many of them highly saliferous. Elsewhere, as in the great Thal plateau, the valleys consist of loess deposits, apparently formed by accumulations of wind-blown dust. In the plains the soil is generally loess mixed with alluvium. The admixture of moisture-bearing sand is the usual test applied by the cultivators to the quality of a soil.

The scanty rain and snowfall, averaging between 6 and 7 inches, is nowhere sufficient to ensure cultivation without artificial assistance. The husbandman's return, therefore, is assured only where his cultivation is dependent on the *kārez* or underground water-channel, on springs, or on streams. All other cultivation is carried on by the artificial dams mentioned above. The areas under cultivation are thus divided into *ābi*, i.e. lands that are permanently irrigated; and *khushkāba*, i.e. 'dry-crop' lands which include land subject to flood cultivation (*sailāba*).

The season for sowing the principal crops in the plains occurs in July and August, for at this time the rivers bring down the necessary moisture. In the upper highlands the dams are filled by the winter rainfall between December and March, when wheat and barley are sown. Here the system of cultivation in 'wet-crop' differs from that in 'dry-crop' areas. In the former the land is first watered and then ploughed, after which the seed is sown broadcast, and for further irrigation the fields are later on subdivided into small plots. In the latter, wheat, barley, and other spring crops are sown with the drill (*nāli*), and the seed depends for further moisture on the subsequent rainfall. In the plains, where the only important crop is *jowār*, the seed is everywhere sown broadcast after the ground has absorbed the flood moisture. There are two harvests, gathered in the spring and the autumn. The spring harvest, known to the Afghāns as *sparlai* or *dobe*

and elsewhere as *sarav* or *arhāri*, is most important in the uplands, while the autumn harvest, known as *mane* in Pashtū and *sānwanri* or *āmen* elsewhere, takes its place in the plains.

Of spring crops, the most important is wheat. *Jowār* (*Andropogon sorghum*) is the chief autumn crop in the plains, and maize in the highlands. Dates constitute the sole crop of importance in Makrān. *Mūng* (*Phaseolus mungo*) and oilseeds in the plains and tobacco and melons in the hills also occupy considerable areas. Of minor products may be mentioned barley, gram, and beans among spring crops; and rice, several varieties of millet, gingelly, cotton, and a little indigo among autumn crops. Lucerne yields from May to October.

Wheat is of several varieties, both red and white. The red is preferred for home consumption, but the white fetches better prices in the market. In the highlands the seed can be sown from the middle of September to the end of January. In the plains wheat is not grown unless there are late floods towards the end of August, affording moisture which is carefully preserved for sowing as soon as the heat of summer subsides in October. Both autumn and winter wheat are cultivated, the former ripening in about nine months and the latter in about five or six. In the highlands the crop is often grazed down with sheep or goats up to February. The harvest commences about June. The straw is carefully preserved for fodder (*bhūsa*). The local varieties are hardy, but are affected by sudden changes of climate and by much rain in early spring.

Jowār is sown broadcast as soon as the lands which have absorbed the summer floods have been ploughed. If spring floods occur, much *jowār* is cultivated for fodder, and the same plants, if they receive water from the summer floods, bear a good crop of grain. Many varieties occur, of which those known as *thuri* and *thor* are most extensively cultivated. Not only does *jowār* form the staple food-grain of the tracts where it is cultivated, but the fresh stalks contain saccharine matter which is much relished. When dry, they constitute excellent fodder (*karb*).

A large increase in the cultivation of melons, known locally as *pālezāt*, has taken place. Both water-melons and sweet melons are grown. Sweet melons are of two varieties: *garma*, or summer melons; and *sarda*, or autumn melons. *Garma* melons are of several kinds—spotted, streaked, or white—and are eaten fresh. It is a peculiarity of *sarda* melons that they can be kept for several months. Those grown from imported Kābul seed are considered the best. The cultivation of melons has been much improved by the introduction of the *joia* system from Kandahār. After the land has been ploughed, long raised beds are formed, enclosed by an irrigation trench on either side about one foot deep. The seed is sown along the edges of the trench and, when

small, the plant is carefully pruned. At a later stage poor flowers are picked off and the young melons are buried in the soil to avoid disease.

Throughout Makrān the staple food is dates. Great attention is paid to the cultivation and care of the date-tree, and the dates of Panjgūr are declared by Arabs to excel those of Basra. Though all the trees belong to the species *Phoenix dactylifera*, they are distinguished locally into more than a hundred kinds, according to the weight, size, and quality of the fruit. All trees are known either as pedigree trees (*nasabi*) or non-pedigree trees (*kuroch*). Among the former, the best varieties are *mozāti*, *āp-e-dandān*, *haleni*, *begam jangi*, and *sabzo*. Fresh trees are raised from offsets; they produce fruit after three to eight years, and continue to do so for three generations. The young offsets must be carefully watered for the first year, and afterwards at intervals until their roots strike the moisture of the subsoil. The date season is divided into three principal periods: *machosp*, *rang* or *kulont*, and *āmen*. In *machosp* (March) the artificial impregnation of the female date-spathes by the insertion of pollen-bearing twigs from the spathe of the male tree is effected. In the season of *rang* or *kulont* (June) the colour first appears on the fruit, and there is general rejoicing. The harvest (*āmen*) lasts from July to September, when men and cattle live on little else but dates. The fruit is preserved in various ways, the most common being by pressing and packing in palm-leaf baskets (*laghati*). Better kinds are mixed with expressed date-juice and preserved in earthen jars known as *humb*. Owing to the excessive quantity of dates in the diet of the people of Makrān, night-blindness is common.

The use of manure is fully appreciated by the highland cultivators. Each one collects the sweepings from his cattle-yard and carries them to his field, and in the neighbourhood of the towns all the available manure is bought up. The following table gives the average out-turn per acre of wheat and *jowār* from experiments made in Administered areas:—

	Wheat. Cwt.	*Jowār.* Cwt.
Irrigated land, manured	13·3	13·6
Irrigated land, not manured	9·0	8·8
Land under flood-irrigation	13·6	12·9
'Dry-crop' land	6·2	6·4

The fertility of land dependent on flood-irrigation is well exemplified by these statistics. Manured and irrigated land has been known to produce as much as 18 cwt. of wheat per acre and 21 cwt. of *jowār*. No rotation is followed in unirrigated lands, the silt brought down by floods being sufficient to ensure an excellent crop whenever there is enough moisture for cultivation. Irrigated fields near homesteads, which can be manured and which therefore are generally cropped twice a year, are allowed to lie fallow in alternate years. In other irrigated lands three or four years of fallow are allowed after each crop.

Fruit is extensively grown in the highlands, and the export is increasing. The principal kinds are grapes, the best of which are known as *lāl*, *sāhibi*, *haita*, and *kishmish*; apricots, mulberries, almonds, apples, pomegranates, peaches, nectarines, quinces, plums, and cherries. Much improvement has been effected by the introduction of fresh varieties. All kinds of English vegetables are grown. Excellent potatoes are produced and the cultivation is extending. The appointment of a Superintendent of Arboriculture and Fruit-growing was sanctioned in 1902, and large numbers of good fruit-trees are raised and distributed. An impetus has recently been given to mulberry cultivation by the inception of sericultural operations.

A test of the increase of cultivation which has taken place in recent years is afforded by the returns of the Government share of revenue in kind. In 1879–80 the revenue in Sibi amounted to 6,575 maunds of wheat, while in 1902–3 it was 11,978 maunds; and between 1882 and 1895 the revenue in wheat from the Quetta *tahsīl* rose from a little more than 4,000 maunds to about 18,000 maunds. The cultivation of tobacco, potatoes, and oats has been recently introduced, and sugar-cane is making some way. Madder-growing, which was extensive at one time, has now ceased.

The implements of husbandry are primitive. The plough is similar to that used in India, but somewhat lighter owing to the softness of the soil. A heavy log is used as a clod-crusher. For making large embankments a plank about 6 feet long and 2 feet wide, called *kenr*, is employed. Small embankments in irrigated lands are made with a large wooden spade (*dal*), which is worked by two men with a rope. Shovels of an improved pattern are now in use near Quetta. Mattocks have a flat blade. A four-pronged fork called *chār shākha* is used for winnowing and for cleaning straw. Efforts have been made, but without success, to introduce a plough worked by horses.

Though the Land Improvement and Agriculturists' Loans Acts have not been formally applied, advances to cultivators are made under executive authority. A special feature is the permission given to District officers to carry out improvements themselves with such advances. Owing to the backwardness of the country, encouragement is given to applicants by the grant of loans on easy terms or without interest. An annual sum of Rs. 60,000 is allotted for the purpose, the advances being ordinarily used for the construction of underground water-channels, embankments, and wells. The people fully appreciate the advantage of the system, and the political effect has been excellent. The rate of interest usually charged is 6¼ per cent. per annum. No difficulty has been found in obtaining repayment. During the five years ending March, 1904, nearly 3 lakhs of rupees was advanced. About 2¼ lakhs was outstanding at the end of that time.

Except in the plains, the agriculturists largely finance one another. The usual method of obtaining a loan is to mortgage the land with possession until both principal and interest have been paid. Tenants-at-will are deeply involved in debt, and live a hand-to-mouth existence. In the plains the Hindu *baniā* plays an important part among the agricultural community. He keeps a running account with the cultivator on the security of the latter's crop, and at each harvest receives a part of the grain-heap as interest, with such amount as the cultivator can spare towards the reduction of the principal. The usual rate of interest is two annas in the rupee per annum, but this rate is only allowed by the *baniā* to those cultivators who give *mahtai*. This is a measure given by the cultivator from his grain-heap at each harvest to induce the *baniā* to advance sums at low interest. Cultivators who do not give *mahtai* have to pay four annas per rupee.

A thickly built bullock, of small size and generally black or brown in colour, is found in the hills and is well suited to them. A pair fetch about Rs. 60 to Rs. 80. The bullocks bred at Bālā Nāri in Kachhi, being suitable for agricultural, siege-train, and army transport purposes, are much sought after by dealers from the Punjab. They are of two distinct types. The taller ones are 56 inches at the shoulder, white or fawn in colour, with horns growing upwards and inwards. The other type is smoky white, with black legs and neck, 42 to 48 inches high at the shoulder, and with horns growing slightly upwards and backwards. Both these kinds fetch good prices, a pair selling for Rs. 100 or more.

Baluchistān has long been noted for its breed of horses. As early as the seventh century, Rai Chach of Sind took tribute in horses from Gandāva. This reputation has ever since been maintained; and in pre-British days the Huramzai Saiyids of Pishīn and many of the Brāhui tribesmen were in the habit of taking horses for sale so far afield as Mysore. Pedigree Baloch mares are still much prized, especially those of the Hirzai breed of Shorān. The best animals in the country are those bred round Mastung and at Jhal in Kachhi. They are big powerful animals with plenty of bone. Another good breed is found in Bārkhān, these horses being about 15 hands in height, with small well-bred heads and long slender arched necks. Their legs are small below the knee, but they are very hardy. The Government, therefore, found much excellent material for commencing horse-breeding operations, when it decided to introduce Government stallions in 1884 under the superintendence of the Civil Veterinary department. The stallions are all Arabs or English and Australian thoroughbreds, the services of which are allowed free of charge to owners for mares which have been branded after inspection. As indicating the results hitherto attained, it may be noted that the Horse-breeding Commission in 1901 pronounced one of the classes of brood mares at the Sibi fair as good as anything to be seen

in England. In 1903 the Army Remount Department took over charge of the operations. The country contained 1,276 branded mares in 1904, and 379 foals from Government sires. In the same year 36 stallions were employed. Horses vary much in price. A tribesman can generally obtain a good mount for Rs. 100 to Rs. 150, but well-bred animals fetch Rs. 400 and more.

The heavy transport of the country is done entirely on camels. They are of the small hill-bred type, excellent over rocky ground but unable to stand the great heat of the plains of India. Their usual load is about 400 lb. They are bred chiefly in the Quetta-Pishīn and Zhob Districts, the Marri-Bugti country, Kachhi, Khārān, and Las Bela. As a rule transport animals are readily available, but the number varies in different parts of the country with the season of the year. The total number of camels in the country has been estimated at about 350,000, but this figure is probably above the mark. In some parts they are used for ploughing. Special arrangements have been made by Government to organize camels for transport purposes. The price of a transport camel varies from Rs. 60 to Rs. 80, and of a breeding camel from Rs. 50 to Rs. 60.

Donkeys are used by every nomadic household and are most useful animals. They frequently carry over 300 lb., and require little or no fodder besides what they can pick up on the march. The Buzdār breed, obtainable in the Loralai District, is the best, and there are some good ones near Kalāt. To enable donkeys to breathe freely when going uphill, it is usual for their nostrils to be slit soon after birth. An ordinary donkey fetches from Rs. 20 to Rs. 30; large donkeys from Rs. 60 to Rs. 80. Encouragement is now being given by Government to donkey-breeding on the same lines as to horse-breeding, and six donkey stallions were stationed in the country in 1904.

The sheep are of the fat-tailed variety, white, brown, and grey in colour. The white with black faces preponderate. A breed imported from Siāhband, near Kandahār in Afghānistān, is preferred for both meat and wool. Sheep are shorn twice, in spring and in autumn, producing 2 to 3 lb. of wool. The quality of the wool is coarse, and it comes to the market in very dirty condition. The goats are small and generally black. They are not very hardy. They yield about 1½ lb. of hair, which is generally used at home for making blanketing, ropes, grain-bags, &c. Both sheep and goats are very numerous, and constitute much of the agricultural wealth of the country. The average price of a sheep is from Rs. 4 to Rs. 5. Goats fetch from Rs. 3 to Rs. 4.

The question of fodder is one of the most difficult in Baluchistān, since no large quantity of grass exists in the greater part of the country, and horses and bullocks subsist chiefly on the straw of cereals. The best fodder available for horses is straw mixed with lucerne, but it is expen-

sive. In the plains the stalks (*karb*) of *jowār* constitute almost the only fodder. The large herds of sheep and goats, which rove over the hills for six or seven months of the year, keep in excellent condition owing to the numberless small cruciferous and leguminous plants, which afford good pasturage. The goats also obtain grazing from the bush growth. Camels find abundant fodder in the salsolaceous plants, *Alhagi camelorum*, tamarisk, &c., and are fond of browsing on most of the trees. The best grazing tracts are to be found in the Loralai District.

Horse and cattle fairs are held at Sibi in February and at Quetta in September. The former is chiefly a breeder's and the latter a dealer's fair. About 1,800 horses are brought to these shows, and prizes to the value of Rs. 6,000 are given. At the Quetta fair many Persian horses are brought for sale.

Cattle suffer considerably from diseases of the pulmonary organs owing to the cold. Foot-and-mouth disease also occurs occasionally. Mange in goats and camels is common. Camels suffer also from colic, rheumatism, fever, and cough. A gadfly causes some mortality in summer, and the cold induces pneumonia in winter. The Superintendent, Civil Veterinary department, Sind, Baluchistān, and Rājputāna, controls the operations of the department in the Province.

The majority of the crops depend either on permanent or flood irrigation, and those raised from rain-water are insignificant. Except *jowār*, *mūng*, and oilseeds, for which a single flooding of the land is sufficient, all other crops require further waterings to bring them to maturity. The sources of permanent irrigation are Government canals, underground water-channels (*kārez*), springs, and streams. Temporary irrigation is obtained by constructing embankments along the slopes of the hills, or by throwing large dams across the river-beds to raise the flood-water to the level of the surrounding country. In the highlands the two principal irrigation works are the Shebo and Khushdil Khān schemes in Pishīn. These 'minor' works have been constructed at a cost of nearly 17 lakhs, and irrigate annually about 6,000 acres. The return on the capital outlay is less than 1 per cent. in each case, but they have produced an excellent political effect in settling down the inhabitants. The revenue is levied in kind at one-third of the gross produce, which includes water rate. In the plains, the Begāri and Desert Canals, which form part of the Upper Sind system, afford irrigation in the Nasīrābād *tahsīl* of Sibi District. The assessment on the former is Rs. 2 per acre, of which R. 1 is reckoned as water rate and R. 1 as revenue, and on the latter Rs. 2–8, of which the water rate amounts to Rs. 1–8. A small cess of 6 pies per acre is also levied. The total area irrigated in 1902–3 was 105,962 acres, and the water rate realized Rs. 1,27,404. Improvements are now under consideration for extending the area commanded by these canals, and a revision of assessment is contemplated.

Twenty-four artesian wells of moderate depth have been bored near Quetta. The Irrigation Commission (1903) considered that experimental borings in Baluchistān appeared to hold out more hope of securing an artesian supply of water at moderate depth than in any other part of India, and steps are being taken to experiment farther on a larger scale.

The indigenous sources of irrigation in Administered areas include 1,803 springs, 496 *kārez*, 132 streams, and 76 wells. The *kārez* is an underground tunnel, driven into the great inosculating fans which spread with a slope of 300 to 600 feet per mile from the mouths of the hill ravines into the valleys. These tunnels have a slope less than that of the surface and, acting as a subsoil drain, carry the water out to the surface. The cost varies, according to their size and the soil in which they are excavated, from Rs. 2,000 to Rs. 8,000. Most of the wells are in the Nasīrābād *tahsīl*; they irrigate about five acres each, and their cost varies from Rs. 500 to Rs. 1,000. Perhaps the most interesting system of indigenous irrigation is that prevailing in Kachhi, where the cultivators, under an organized method of co-operation, construct annually immense earthen dams in the Nāri river for raising the water to the surface. A specially expert cultivator, known as the *rāzā*, is selected to superintend the work, and the cultivators living for many miles along the banks of the river are called in with their bullocks to construct the dam. The implement used is the wooden plank-harrow (*kenr*). Some of these dams are as much as 750 feet long, 180 feet broad at the foot, and 50 or 60 feet in height. Every village has to supply its quota of men and bullocks, or, should it fail to do so, has to pay a proportionate amount in cash. There are many of these dams in the Nāri; and in July and August, when the floods come, the upper dams are broken as soon as sufficient water for the area irrigable by each has been received. Still, much water runs to waste, and the scientific development of this indigenous system would probably result in a very large increase of cultivation.

Fisheries.

The Makrān coast is famous for the quantity and quality of its fish, and the industry is constantly developing. It affords a considerable income to the States lying along the coast, as they generally take one-tenth of the fresh fish as duty. The fishermen are principally Meds and Koras. The fish are caught both with nets and with the hook and line. Large shoals of cat-fish (*gallo*) and of *kirr* (*Sciaena diacanthus*) appear off the coast towards the end of the cold season, when they are surrounded and caught. After arrival on shore the air-bladders are extracted, and are eventually exported to England for the manufacture of isinglass. The fish are salted and used as food by the people of the country. They also form a large article of export to Bombay and Zanzibar. Sharks are prized

especially for their fins, which fetch as much as R. 1 per lb. Fresh sardines are so plentiful that they not infrequently sell at the rate of forty for a pice (one farthing).

Rents, wages, and prices.

The greater part of the land is held by a cultivating class of peasant proprietors. The few tenants are almost all tenants-at-will. In local parlance such a cultivator is 'the husband of a slave girl,' for he can be replaced at his master's will. He can acquire no permanent rights, and is liable to ejectment after the crop has been harvested. Sometimes, when much labour has to be expended on the construction of embankments, a tenant retains possession so long as the embankment remains unbreached or for a given term of years. In Makrān a curious custom prevails, giving to a tenant-at-will a permanent alienable right in all date-trees which he may plant. Occupancy rights are seldom, if ever, acquired in irrigated and only occasionally in unirrigated lands. Where they have been so acquired, they usually represent compensation for the labour expended by the tenant on raising embankments.

As might be expected in a backward country in which crops are liable to great variations, rent consists in a share of the grain-heap. Various systems are in vogue; but, as a general rule, the distribution in unirrigated lands is made on the principle of an assignment of a portion of the produce for each of the chief requisites of cultivation: the land, seed, bullocks, and labour. In irrigated lands a further, and proportionately large, share is assigned for the water. Certain services have also to be performed by the tenant, such as the supply of fuel and the transport of the proprietor's share of the produce. The position of the tenants on the whole is strong, since, owing to the inveterate laziness of the land-holding classes, there is a large demand for them and they can enforce their own terms.

No cooly class exists among the cultivating population; tenants-at-will perform the services mentioned above, while the household and agricultural work of men of means is done by their servile dependants. At harvest-time the workers, many of whom are women and children, receive a share of the grain-heap, generally one-twentieth. To shepherds are given their food, two changes of clothes, and a proportion of the lambs born during the year. The wages of village servants consist in a fixed measure from the grain-heap, or in a special share of water for irrigation. Cooly work proper is a peculiarity of the industrial centres which have grown up since the British occupation, and here a plentiful supply of labour from Makrān and Afghānistān is always to be found. As a navvy the Hazāra or Ghilzai Afghān is unrivalled. All domestic servants and skilled labourers come from India, chiefly from Sind and the Punjab.

Owing to the severity of the climate and the comparatively large

amount of clothing and fuel required by the wage-earning classes, wages throughout the highlands are higher than those usually prevalent in India. An unskilled labourer receives Rs. 11 to Rs. 15 a month; a skilled labourer, Rs. 20 to Rs. 45; mechanics, Rs. 35 to Rs. 90. The wages of domestic servants vary from Rs. 10 to Rs. 25 in European households, and from Rs. 6 to Rs. 12 with food among natives. The clerical wage rises from Rs. 20 for vernacular clerks to about Rs. 200 for those who know English. In a few special cases it is higher. A levy footman is generally paid Rs. 10 and a horseman Rs. 20 a month, for which sum the latter must maintain a mount. The opening of communications has not materially affected the wages of unskilled labour, but there has been a decrease in the earnings of artisans and clerks.

Wheat is the staple food-grain in the highlands and *jowār* in the lower tracts. Firewood and chopped straw for fodder also form important items in domestic economy. Prices rule high when compared with those prevailing in India. The following table exhibits the average prices (retail) in seers[1] per rupee of staples at principal centres for the two quinquennial periods ending 1895 and 1900:—

Station.	Wheat.		*Jowār.*		Chopped straw fodder.		Firewood.		Punjab salt.		Country salt.	
	1895.	1900.	1895.	1900.	1895.	1900.	1895.	1900.	1895.	1900.	1895.	1900.
Fort Sandeman	14	10½	15½	11½	59½	56	115	98¾	6	6½	14¾	11½
Loralai . .	17	11½	18¾	13¼	57½	58¾	75	79	6½	6¾	9½	9
Sibi . . .	15¼	12½	22½	17½	109½	81¼	105¼	119	9¾	9½	14¾	13¼
Quetta . .	13¼	11	20¼	14½	48¾	45½	66	73	8¾	9¼	12	11

In 1903 the price of wheat at Fort Sandeman and Quetta was 11¾ seers per rupee, equivalent to about 35 lb. for *2s.*, and at Loralai 14½ seers, equivalent to 44 lb. for *2s.* The price of *jowār* in the plains at Sibi was 20½ seers per rupee, equivalent to 62 lb. for *2s.* The purchasing power of the rupee in the case of the more important staples shows a marked decrease during the decade ending 1900, but the period was one of abnormally bad agricultural conditions. Prices are affected largely by the seasons. They are always lower in the plains than in the hills.

There has been a steady improvement in the standard of comfort throughout Baluchistān since the British occupation. This is more marked in the tracts under British administration than in the Kalāt State. Tea is now becoming a common luxury; sandals have given place to leathern boots and shoes; warmer clothing is worn in place of the light cotton garments formerly in vogue; and ornaments are

[1] One *seer* is equivalent to about 2 lb.

more largely used by women. Clerical establishments are all recruited from India. Their standard of living is somewhat high and leaves little opportunity for saving. A middle-class clerk generally has a house with two or three rooms, a kitchen and bath-room. His furniture consists of two or three chairs, a small table, lamps, carpets, rugs, and cooking utensils. He generally has one servant, who is his cook and does other household work. He has two meals a day, morning and evening.

There is a considerable difference between the mode of living of a headman owning land in a village and of an ordinary cultivator. The former generally wears clothes of a superior quality, and he adds to the number a thick coat and waistcoat. He has larger house accommodation and more furniture, and he possesses a sufficiently large number of cooking utensils, rugs, blankets, felts, quilts, and saddle-bags. Both utensils and bedding in an ordinary cultivator's house are scarce. One or two earthen or metal pots, two or three bowls, an iron tripod, and a few ragged quilts complete his equipment. His dress in summer costs about Rs. 6: a turban at Rs. 1-8-0, and a shirt, trousers, shoes, and sheet at about R. 1 each. In winter he adds a felt overcoat costing Rs. 3, and sometimes a waistcoat at Rs. 2. His wife's dress, which consists of a wrapper, a shift, wide drawers, and shoes, costs about Rs. 4.

Forests.

Generally speaking, the country is scantily clothed with vegetation, trees are few in number, and most of the hills which are not protected by other and higher ranges are bare of forest growth. In Administered territory steps were taken in 1880 to control certain forest areas in the Sibi District, and rules were issued for their management in 1881. Legal and systematic action commenced in 1890, when the Forest Law and Forest Regulation Acts were enacted. Since then twenty-seven tracts have been 'reserved,' comprising a total area of 203 square miles. Some tracts in Zhob, which have been hitherto protected by the Political Agent, are now being brought under the Forest department. Between 1891 and 1900 the forest revenue averaged Rs. 17,102 and the expenditure Rs. 37,531, leaving an annual deficit of Rs. 20,429. The revenue in 1900-1 was Rs. 16,927, and the expenditure Rs. 29,254. Owing to a change of system the deficit has now been reduced, and in 1902-3 the revenue was Rs. 19,336 and the expenditure Rs. 23,240. These figures exclude the revenue and expenditure of the Zhob forests, the income of which was Rs. 6,370 in 1901-2 and the expenditure Rs. 1,713. The greater part of the revenue is derived from the sale of timber and fuel, the annual income from this source averaging nearly Rs. 15,000. The Reserves are of three kinds: juniper forests, pistachio forests, and mixed forests. The first of these, bearing *Juniperus excelsa*, form the

principal Government forests in Baluchistān. They are twelve in number, covering an area of 114 square miles. The two Reserves which contain *Pistacia khanjak* have an area of 13 square miles. Mixed forests number eleven, with an area of 78 square miles. The principal trees in these forests are *Prosopis spicigera*, *Capparis aphylla*, *Tamarix indica*, *Tamarix articulata*, *Dalbergia Sissoo*, *Olea cuspidata*, *Pistacia khanjak*, and *Acacia modesta*. In Zhob *Pinus Gerardiana*, *Pinus excelsa*, and *Olea cuspidata* are the commonest trees in protected areas. The regeneration of juniper and pistachio has not been very encouraging, except in areas closed to grazing. Here also the improvement in undergrowth indicates the benefits to be derived from the exclusion of browsing animals, especially goats and camels. Experiments in the introduction of exotic trees have not been successful, except in the case of fruit and one or two roadside trees.

No protected and legally recognized unclassed forests exist, but certain trees growing on land at the disposal of Government have been 'reserved' and their cutting is regulated. These include, besides those mentioned above, *Pistacia mutica*, *Fraxinus xanthoxyloides*, *Zizyphus nummularia*, *Zizyphus oxyphylla*, *Tecoma undulata*, *Populus euphratica*, and *Periploca aphylla*.

Pine timber is used for building purposes at Fort Sandeman, and juniper at Ziārat. In the rural villages, almond, apricot, mulberry, and *sinjid* wood (*Elaeagnus angustifolia*) are used for roofing. Minor forest produce includes the gum of the wild almond, cumin seed, hyssop, juniper berries (which are used for flavouring tobacco in Calcutta and Kanauj), the seeds of the edible pine, and the wild pistachio. The latter is much prized as an article of food by the natives. Asafoetida (*hing*), the gum of *Ferula persica*, is found in parts. In the lower tracts of Kalāt and Las Bela dwarf-palm, gum arabic, bdellium, honey, and shellac occur.

The Forest department is in charge of an Extra Assistant Conservator of Forests, borne on the Punjab Provincial list, who is styled the Chief Forest Officer, and who works under the general control of the Revenue Commissioner in forest matters. The Reserves are divided into three ranges, known respectively as the Quetta, Ziārat, and Sibi range. Each range is in charge of a Deputy-Ranger, who is assisted by forest guards. The extraction of timber and fuel is carried on by unregulated fellings. The sale of minor forest produce, such as grass, fruit, flowers, &c., is conducted by public auction or by permit. The relations of the Forest department with the people of the country have always been conciliatory. Minor forest offences average 208 per annum.

Timber for building purposes and fuel is imported from Sind. The question of fuel supply was considered at a conference in 1891, and it was decided that the main object of Government should be to maintain

existing and future forest Reserves intact for use in times of emergency. Government departments within reach of the railway are, therefore, supplied from external sources and special railway rates are allowed. The average area of 'reserved' forest closed to grazing is 126 square miles. In the other parts of closed areas grazing by right-holders is permitted. All these areas are available for relief in times of scarcity. The question of the depletion of the undergrowth in the large grazing tracts near the towns is one of some difficulty.

Mines and minerals.

Coal is the only mineral produced in large quantities. Petroleum has also been worked, and a syndicate has recently been formed for extracting chromite in the Quetta-Pishīn District. The production of coal has been (1886) 122 tons, (1891) 10,368 tons, (1901) 24,656 tons, and (1903) 47,374 tons; and of petroleum (1886) 27,700 gallons, and (1891) 40,465 gallons. In 1903 the output of chromite amounted to 284 tons. Earth-salt is manufactured chiefly in Kachhi and along the coast. It is also obtained in Quetta-Pishīn and part of Zhob, and from the Wad-i-Sultān in the Hāmūn-i-Māshkel. A salt-mine is worked in Las Bela. The average annual out-turn of earth-salt is estimated at about 1,000 tons. Lime is burnt at Quetta and also in Las Bela. Saltpetre is manufactured in small quantities in Kachhi.

Coal is fairly widely distributed in the Central Brāhui range, and is worked at Khost, in the Sor range near Quetta, and in the Bolān Pass. It generally possesses good steam-producing qualities, but is very friable. The seams vary from 6 inches to 4 feet in thickness, outcropping in hill-sides and dipping steeply, and are worked by excavating adits horizontally from the face of the hills. The principal colliery is at Khost, where the mines are worked by the North-Western Railway under European supervision. Capital to the total amount of about 3½ lakhs has been invested in the undertaking. The number of men employed daily is about 700. A miner earns about 12 annas a day. The working cost has recently been reduced to about Rs. 8 per ton. The miners are chiefly Makrānis, but Hazāras and local Afghāns are also employed. The output, which amounted to a total of 246,426 tons between 1887 and the end of 1903, is almost entirely consumed by the North-Western Railway. In the Sor range, in which coal is to be traced for some seventeen miles, and in the Bolān Pass leases have been granted of small stretches of coal to five lessees, Government finding the supervising staff necessary for periodical inspection and to ensure safe and scientific working. The coal has to be transported on camels, and is all consumed in Quetta. About 100 men are employed daily.

The presence of petroleum is indicated at Shorān in Kachhi, in the Bolān Pass, in the Harnai valley, and at Khattan in the Marri country. A boring was made at Kirta in 1889 and a show of oil was struck at

360 feet, but it was afterwards abandoned, as also was one at Spīntangi. The borings so far undertaken have been made in far less promising strata than the Siwāliks, which have not been tested; and there is no prima facie reason why mineral oil should not be discovered in the natural reservoirs of this geological group, which has produced it in Burma and Persia. Operations were carried on by Government at Khattan for seven years from 1884 to 1892, and by a private company in 1893–4, but both ventures were ultimately abandoned. Thirteen bore-holes were put down, the deepest being 736 feet, but oil was not obtained below 332 feet. It was pumped to the surface. On analysis the oil was described as containing 45 to 55 per cent. of pitch, with 45 to 35 per cent. of lubricating oil, but no light oils whatever. The total output between 1886 and 1892 was 777,225 gallons, the largest annual amount being 309,990 gallons in 1889. The private company afterwards extracted 60,000 gallons of oil. The expenditure incurred by Government amounted to about 6½ lakhs of rupees, and there was a net loss of about 4 lakhs; but the oil may yet prove valuable for the manufacture of patent fuel. The area prospected lies in the territory of the Marri chief, who was paid Rs. 300 a month by Government during the operations, but he afterwards compounded with the private company for a lower sum.

Little is known of the unworked minerals of the country. Chrysotile, also known as fibrous serpentine or Canadian asbestos, occurs in some quantities in the Zhob valley and in the Quetta-Pishīn District. Samples of the fibre have been found to be of some commercial value. Experts have pronounced clays obtained from the Bolān Pass as fit for the production of good paint and terra-cotta and of fair Portland cement at remunerative rates. Oriental alabaster is obtainable in Chāgai, and copper, lead, iron ores, and alunogen or hair-salt have also been found there. Ferrous sulphate (melanterite), known locally as *zāgh*, is obtainable in the east of the Jhalawān country, and is used by the natives for dyeing purposes. Carbonate of lead (cerussite) is found at Sekrān near Khuzdār. A sulphur-mine was worked by the Afghān rulers near Sanni in Kachhi, but it has been abandoned since the British occupation. Iron bisulphide (marcasite) is of frequent occurrence, but it has nowhere been found in sufficiently large quantities to render it commercially valuable.

Arts and manufactures.

Existing conditions in Baluchistān are still too primitive to admit of the organization of industries on commercial lines. Such as there are consist of handicrafts worked at home, and in the majority of cases the work is done by the women in their spare time. In all instances the same worker completes the article in hand from the raw material down to the finish. All Baluchistān art-work displays specially Persian characteristics.

Cotton-weaving is a moribund industry still existing in a few parts. The cloth, known as *kora* in the east and *bīst dasti* in the west, is woven in pieces about 30 feet long by 28 inches broad. Coloured double sheetings called *khes*, which are fashionable among the natives, are also manufactured. Silk-weaving is done in Makrān alone. The best specimens are tartans, known as *man-o-bas*, and a dark-green crape with crimson border called *gūshān*. They resemble fabrics made at Purnea and Chittagong.

Embroidery is very common, especially among the Brāhuis. It is highly artistic and of many varieties, but unfortunately the products have been injuriously affected by the introduction of aniline-dyed silks. Of the Brāhui embroideries, that called *mosam* is the best. It consists of very close work in a form of satin stitch, the design being primarily geometric. Other kinds, which are not quite so fine, are known as *parāwez* and *parīwār*. These embroideries are generally made in four pieces: a pair of cuffs, a breast-piece resembling the linen front of a European shirt, and a long panel forming the pocket. Another fine kind is the Kandahār embroidery, which is generally worked with a double satin stitch in ivory white. Padded or quilted embroidery is also not uncommon. In the Marri and Bugti hills the prevailing designs consist of medallions, made up of zones of herring-bone stitch separated by rings of chain stitch. In Las Bela a fine embroidery is done on silk and cloth with the crochet needle. In Kachhi, Kalāt, Las Bela, and Makrān, shoes, sword-belts, and other leathern goods embroidered in silk are popular. The Kachhi embroidery is exceedingly elaborate.

The articles known as Baloch rugs are not an indigenous product of Baluchistān. They are chiefly made at Adraskan, a place south of Herat, and in Seistān. Large quantities are, however, imported through Quetta. Saddle-bags and nose-bags made in this style are popular among Europeans for cushion covers, chair backs, &c. A few pile carpets are made in the Jhalawān country, but entirely for home use. Rugs in the *darī* stitch are manufactured in almost every nomad household. They are made for sale in some quantities by the Angārīas of Las Bela and in the Bārkhān *tahsīl* of Loralai District. Saddle-bags and nose-bags richly ornamented with shells are also made there. The *shufi*, or long rug usually stretched in front of the bedding in a nomad tent, is manufactured in Khārān and the Sarawān country. Felts of excellent quality and richly embroidered are also made, but chiefly for home use. Among minor woollen products, manufactured chiefly from camels' and goats' hair, are ropes and grain-bags, blanketing for tents, girths, and camel gear.

Since the British occupation four steam flour-mills have been opened. There are also two ice factories and a steam press for chopped straw,

wool, and oil. Patent fuel is manufactured from coal-dust at Khost. A brewery has been started near Quetta, the out-turn of which has risen in the eighteen years between 1886 and 1903 from 86,000 to 347,000 gallons. A plentiful supply of unskilled labour is available for these industries, chiefly recruited from trans-border Afghāns and Makrānis.

Among minor industries may be mentioned tanning, the manufacture of carbonate of soda, mat- and basket-making, and indigenous methods of dyeing. Tanning is in vogue chiefly in Kachhi, Las Bela, and Makrān. A good soft leather is produced by immersing the hides in lime and carbonate of soda, and afterwards tanning them with a decoction of the exudation of the tamarisk. The manufacture of carbonate of soda, chiefly from the saltworts known as *Haloxylon Griffithii* and *Haloxylon salicornicum*, is increasing. The white variety is preferred to the black. The saltworts are cut and after being partially dried are set on fire. Much matting and raw material for mat-making is exported from Baluchistān, especially from the lower highlands and Makrān. For this purpose the dwarf-palm (*Nannorhops Ritchieana*, called *pish* or *dhorā* in the vernacular) is employed. In 1900-1 the exports of mats and raw material to Sind were valued at Rs. 44,800. The people are well versed in the manufacture of natural dyes from lac, decoctions of willow and olive leaves, madder, &c. Pomegranate husks, alunogen or hair-salt, and lime are used as mordants. In Quetta rose-water and *attar* of roses are manufactured by Punjab Khojas from the common Persian rose. Experiments recently made in sericulture have proved successful, and Quetta silk has been pronounced of the best quality. Measures are now being taken to develop the industry.

Commerce and trade.

The indigenous trade of the Province was insignificant in former times. The country owed such commercial importance as it possessed to its geographical position athwart the main lines of communication between Persia, Central Asia, and India. The routes followed by caravans lay through the Gomal Pass to Multān, through the Harnai, Bolān, and Mūlā Passes to Shikārpur, and via Kalāt and Bela to Sonmiāni; but trade was greatly hampered by the raiding proclivities of the adjacent tribes and the system of levying transit-dues. In the earliest engagement between the British and Kalāt an attempt was made to regulate the latter, but without much success. The levy of transit-dues still constitutes one of the greatest impediments to trade in the Kalāt State. In Administered areas the system has been broken down, generally by the expropriation of right-holders. The general character of the trade between India and Baluchistān in pre-British days resembled the land trade now carried on with Afghānistān, exports from Baluchistān consisting of wool, dried fruits, medicinal drugs, and horses, and imports

of metals, piece-goods, sugar, and indigo. The traders were chiefly Bābi Afghāns, Hindus of Sind, whose transactions extended far into Central Asia, and Powinda Afghāns.

Excluding internal trade, the commerce of Baluchistān divides itself naturally into two classes: trade borne by sea, land, and rail to and from other Provinces in India; and foreign maritime and land trade. Omitting land-borne trade with Indian Provinces, the total trade was valued in 1902–3 at more than 2 crores of rupees, a striking evidence of the prosperity engendered by British rule. Exports consist chiefly of wool, dried and fresh fruits, medicinal drugs, fish and shark-fins, raw cotton, and mats; imports, of piece-goods, food and other grains, metals, and sugar. The chief maritime centres of trade are Gwādar and Parni; inland marts are Quetta, Sibi, Nushki, Kila Abdullah, Bhāg, and Gandāva. Much trade also finds its way direct to large markets in Sind, such as Jacobābād, Shikārpur, and Karāchi.

	By Sea.			By Rail.	
	1890–1.	1900–1.	1902–3.	1900–1.*	1902–3.
IMPORTS.	Rs.	Rs.	Rs.	Rs.	Rs.
Cotton—					
(*a*) Piece-goods .	2,57,366	2,95,475	2,32,133	29,84,085	26,87,840
(*b*) Other articles .	5,979	7,222	1,667	28,564	1,01,454
Grain and pulse .	2,97,631	1,81,433	3,21,389	7,74,424	18,09,222
Provisions . .	145	1,919	815	5,40,891	6,43,812
Metals and manufactures of metal	...	...	...	2,48,890	7,27,740
Sugar . . .	...	8,099	15,669	8,12,034	8,31,087
Woollen piece-goods . .	...	...	...	81,536	1,43,248
All other articles .	1,35,763	96,141	95,190	44,43,352	57,88,519
Total	6,96,884	5,90,289	6,66,863	99,13,776	1,27,32,922
EXPORTS.					
Animals, living—					
(*a*) Horses, ponies, mules, &c. .	...	...	...	1,09,710	1,90,050
(*b*) Others . .	...	31	...	...	81,484
Cotton, raw . .	69,749	74,075	1,66,279	...	...
Drugs, medicinal .	...	...	...	5,49,750	7,32,780
Fruits . . .	27,105	21,023	20,661	7,72,902	7,19,400
Grain and pulse .	3,702	45,665	40	1,05,568	2,49,021
Provisions—					
(*a*) Fish, including shark-fins .	2,13,072	2,46,336	2,06,142	...	...
(*b*) *Ghī* . .	54,205	1,37,911	584	3,61,120	10,974
(*c*) Other kinds .	216	1,556	...	...	...
Wool, raw . .	1,215,95	96,923	96,320	22,30,095	14,66,016
All other articles .	3,71,745	1,59,688	2,04,877	23,82,643	41,98,364
Total	8,61,389	7,83,208	6,94,903	65,11,788	76,48,089

* The first year for which figures are available.

All goods moving within the country, otherwise than by rail, are carried on camels. They consist chiefly of wool, agricultural produce, and fruit, including dates. Trade is almost entirely conducted by Hindus from India, but there are a few Muhammadan traders from Kandahār, and along the coast Khojas are fairly numerous. The Hindus move with the Brāhuis, up in summer and down in winter, collecting produce at convenient centres whence they send it direct to the larger markets. Barter is common, food-grains being exchanged for salt, fish for dates, and cloth for *ghī* and wool.

The maritime trade is carried on from the coast of Makrān chiefly with Bombay and Karāchi, salted fish, shark-fins, mats, wool, and raw cotton being exchanged for cotton piece-goods, food-grains (chiefly rice), and also sugar. Trade by land passes across the frontier to the Frontier Province, the Punjab, and Sind, but it is not fully registered. Wool, *ghī*, dwarf-palm for mat-making, and sheep and goats are the chief exports, and piece-goods and food-grains the imports. Of trade carried by rail, raw wool, fruits, medicinal drugs, and *ghī* constitute the largest articles of export; piece-goods, grain, metals, and sugar are the largest imports. The table on the opposite page exhibits the value of the maritime and rail-borne trade with other parts of India.

No statistics of foreign trade by sea are available; but native craft carry dates and matting from Makrān to the Persian Gulf, Arabia, and the east coast of Africa. Trade by land is carried on with Persia and Afghānistān, but is much hampered by the fiscal policy of those countries. The export of wheat, *ghī*, and horses from Afghān territory is entirely prohibited, though a good deal of smuggling takes place. The export of almonds is a State monopoly, while imports are liable to heavy duties. Transport too is entirely on camels and donkeys. The trade is registered at Chaman and Nushki; but, as goods cross the frontier at many other points on both the north and the west, the statistics are far from complete. Trade along the newly opened route from Nushki to Persia has to face keen competition from Russian goods brought from the Trans-Caspian Railway through Meshed; but, in spite of these drawbacks, it exhibits a considerable expansion. The table on the next page shows the value of the chief imports and exports of foreign land trade. The decrease in 1902–3 was due to a long period of drought which culminated in 1900–1.

Communications.

The impression created on the wild tribes of the frontier by the construction of railways and roads has been immense; and their civilizing influence has been felt far beyond the political frontier, for every year many thousands of trans-border Afghāns travel to India by their means to find remunerative employment. All the railways and the best of the roads have had their origin in strategical needs. The necessity of a railway was forcibly demonstrated by the

waste of treasure and life which occurred during the second Afghān War in the weary marches between Sind and Quetta, and the Sind-Pishīn Railway owed its inception to this period. The critical year of 1885 caused the extension of the railway up the Bolān Pass, and shortly afterwards the Bolān road was bridged and metalled. The Pishīn-Dera Ghāzi Khān road was constructed to control the country between Pishīn and the Punjab, and to form an alternative line of communication with the Indus valley.

	1897-8.*	1900-1.	1902-3.
IMPORTS.	Rs.	Rs.	Rs.
Animals, living	1,37,214	3,00,107	2,02,670
Drugs and medicines	75,853	85,522	1,64,011
Fruits	4,50,095	3,89,256	2,40,038
Grain and pulse	2,18,312	91,548	17,484
Provisions—			
(*a*) *Ghī*	1,15,897	4,75,412	90,778
(*b*) Other kinds	24,014	7,265	640
Wool, raw	2,08,536	2,62,125	1,71,588
All other articles	39,084	2,23,299	2,23,646
Total	12,69,005	18,34,534	11,10,855
EXPORTS.			
Cotton piece-goods, &c.	3,11,742	8,06,997	5,07,200
Dyeing materials	55,043	2,62,026	52,527
Sugar	6,217	42,575	47,878
Tea	25	51,585	24,716
All other articles	69,536	2,17,657	2,24,016
Total	4,42,563	13,80,840	8,56,337

* The first year for which figures are available.

The total length of railways open for traffic in 1891 was 277 miles, which had increased to 399 miles in 1901. The opening of the Nushki Railway, which was completed in 1905, has brought the total up to 481 miles. The railways, which are on the standard gauge, have been built at immense cost. The total capital outlay, excluding the Nushki Railway, has been 11 crores, equivalent to 7·3 millions sterling, or an average cost of nearly 3 lakhs per mile. The Sind-Pishīn line enters the Province near Jhatpat, traverses the Harnai valley, and has its terminus at Chaman. Its total length, including the branch line from Bostān to Quetta, is 312 miles. It was begun in 1879, but not completed to Chaman till 1892. The chief difficulties in construction were met with in the Chappar Rift, at Mud Gorge, and in excavating the KHOJAK tunnel. The Chappar Rift is a huge gorge traversing the Chappar mountain at right angles to its general strike. It is crossed by a single span bridge, 150 feet long and 234 feet high, which is reached by tunnels excavated in the solid rock with the aid of adits

horizontal to the face of the cliffs. At Mud Gorge slips used to obliterate the line entirely at times, but, since 1894, the construction of a system of dams has prevented further subsidence. The surface line originally constructed from Rindli through the Bolān Pass was realigned in consequence of serious damage done by heavy floods in 1889 and 1890, and was taken from the Nāri river to Mushkāf and thence along the east of the valley. The tunnelling on this line, especially between Mushkāf and Pishi, was extremely heavy. The gradients also are steeper than those on the Sind-Pishīn line, and are as much as one in twenty-five between Mach and Kolepur. The length of the Quetta-Nushki Railway is 82 miles. The principal works are the Nishpa tunnel, half a mile long, and the excavation of the alignment through the Shaikh Wāsil gorge. The cost will probably be less than 1 lakh per mile.

There has been a continual increase of roads since the British occupation, connecting remote parts with the railways and the Punjab. The principal extension has taken place in the north-east corner of the Province. In the south and the west no cart-roads exist, and many of the routes are barely practicable even for camels. The following table gives statistics of the mileage and character of the roads maintained under the supervision of officers of the Military Works service, who are in charge of civil works in the Province:—

	1901. Mileage.*	1903. Mileage.
Cart-roads bridged and metalled †	115	120
Cart-roads partially bridged and metalled	667	668
(*a*) Maintained from military funds	420	421
(*b*) Maintained from civil funds	247	247
Tracks and paths	1,602	1,628
(*a*) Maintained from military funds	128	134
(*b*) Maintained from civil funds	1,474	1,494
Total roads and paths	2,384	2,416

* In 1891 the total mileage of roads and paths was 1,520. Details are not available.
† These roads are maintained from military funds.

The total cost of maintenance of these roads in 1902–3 was Rs. 74,919. In addition, 1,128 miles of roads and paths are supervised by civil officers, of which 1,101 miles are maintained from Provincial revenues and 27 from Local funds. In directly Administered areas the more important roads are the Bolān-Quetta-Chaman road, the Pishīn-Dera Ghāzi Khān road, and the Harnai-Fort Sandeman road. A road partially bridged and metalled runs from Quetta through Kach and Ziārat to Smāllan on the Harnai-Fort Sandeman road. All these roads are provided with resthouses or *dāk*-bungalows at convenient stages. The roads from Sibi to Quetta, from Dera Ghāzi Khān to Pishīn, and from Harnai to Loralai are maintained from military

funds. The maintenance of the remainder, with some minor exceptions, falls on Provincial revenues, Local funds being applied only to the maintenance of roads in the Quetta municipality and a few other head-quarters stations.

Of the more important roads, that in the Bolān Pass was commenced in 1886–8, and completed to Quetta in 1888, at a total cost of about 19 lakhs. The section between Quetta and Chaman (distance 78 miles) was improved and completed between 1887 and 1893. The Pishīn-Dera Ghāzi Khān road was commenced in 1886 and completed in 1888, at a total cost of 7 lakhs. The length in Baluchistān is 224½ miles. The section of the Harnai-Fort Sandeman road between the former place and Loralai was constructed as a military road after the occupation of the Bori valley in 1886, and it cost Rs. 10,600 per mile. It traverses the fine Dilkūna gorge, which has been negotiated by carrying the road along the cliffs above flood-level. The road has been extended by civil agency from Loralai to Fort Sandeman. An important link of communication between Zhob and the Punjab will shortly be secured by the road through the Dhāna Sar in the Sulaimān range to Dera Ismail Khān, which is now being realigned and reconstructed at great cost. It is 115 miles long, of which about 47½ miles lie within Baluchistān. The remaining fair-weather paths and tracks form a network connecting all the principal places in Administered areas, but they are, as a rule, fit only for camel carriage. On the west the Nushki-Seistān trade-route, 378 miles to Robāt Kila, has been aligned at a cost of Rs. 29,864. Camel carriage is everywhere the ordinary means of transport, but donkeys are largely employed for light loads. In Kachhi use is made of bullock-carts of the type in vogue in Sind.

The steamers of the British India Steam Navigation Company carry passengers, mails, and cargo between India and Pasni and Gwādar on the coast. These ports are visited on alternate weeks. Owing to shoal-water, a landing can be effected only in country boats.

The postal service is under the Deputy-Postmaster-General of the Sind and Baluchistān Circle. In 1881 there were 19 post offices and 453 miles of postal line, in addition to the railway. In 1902–3, 54 post offices and 27 letter-boxes were open, and the miles of communication numbered 2,281; the letters dealt with numbered 1,201,580; postcards, 811,030; packets, 150,745; newspapers, 208,050; and parcels, 27,740[1]. The total amount of savings bank deposits was 7·8 lakhs. The money-order system is generally utilized by the Indian population temporarily resident in the country, and also by Afghān merchants trading with India. Beyond the railway, mails are carried by horsemen, who are appointed by the District officers, and whose

[1] The figures for post offices and miles of communication do not include 372 miles of *dāk* line from Nushki to Robāt Kila and the four post offices located thereon.

pay forms a Provincial charge. The levies so employed numbered 214 in 1903-4. A postal service in Las Bela has been organized by that State between Karāchi and Bela.

The first telegraph line constructed in Baluchistān was the Indo-European system, which reached Gwādar in 1863. Treaties and arrangements are in force with Las Bela and Kalāt for the protection of the line. It skirts the coast for 399 miles. The rest of the country, especially the north-east, is well provided with telegraphs; and a line runs to Robāt Kila on the Persian frontier, which also connects with the Indo-European system. The tribesmen through whose country the lines pass are responsible for their protection, with the exception of the line to Kalāt, for which a small establishment is maintained.

Famine.

Actual famine is unknown, but scarcity is frequent. Cultivation depends either on permanent or on flood irrigation; and as *kārez* are most numerous in the upper highlands, these areas are better protected than the lower parts. Everywhere, except in the plains, the principal harvest is reaped in the spring, the chief crop being wheat. In the plains, *jowār* is the staple food-grain. Trade returns show that the average aggregate imports of food-grains by rail exceed the exports by about one-third; but much of the imported grain must be consumed by the foreign residents, and a fair wheat harvest is probably sufficient to carry the native-born population through the year. Again, the majority of the people are both graziers and agriculturists, and though the season may be unfavourable to agriculture, it may still be one of fairly good pasturage. Only a combined failure of both crops and grazing for consecutive seasons causes a crisis. Recent experience indicates that, while the people can tide over two years of bad rainfall or snowfall, a third reduces them to straits. Prices rise and a large emigration takes place to more favoured tracts.

Local tradition speaks of constant scarcity, and Masson records a ten years' drought from 1830 to 1840. Between 1897 and 1901 a succession of bad years resulted in a deficit of land revenue of about 1½ lakhs of rupees, an expenditure of Rs. 1,87,443 from special Imperial grants on works and relief, and of Rs. 30,000 from the Indian Famine Relief Fund. Large advances were also made for agricultural purposes. Produce revenue adjusts itself automatically; and during the first two years some remissions and suspensions in assessed areas, combined with assistance for the purchase of seed and stock, were found to be all that was required. But, on the culmination of the drought in 1900-1, relief works had to be opened, chiefly roads, and doles of grain were distributed to the Marri and Bugti tribes. Advances and doles to the amount of about Rs. 34,000 were also made by Native States. No mortality was recorded.

The greatest safeguard against famine consists in the migratory habits of the people, and the proximity of fully protected areas in Sind, where ample means of subsistence exist for all who are willing to work. The two state irrigation schemes in the upper highlands are dependent on rainfall, and cannot, therefore, be regarded as entirely protective. Except in Kachhi it is doubtful if there is much scope for other large schemes. The widest source of protection probably lies in the extension of embankments for catching the rain-water as it runs off the stony sides of the hills. There are indications that large resort was had to this method of retaining the moisture in prehistoric times, the *gabrbands* of the Jhalawān country having been undoubtedly intended for this purpose.

Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. The following is a list of those who have held the substantive appointment: Colonel Sir Robert Sandeman (1877), Major-General Sir James Browne (1892), Mr. (now Sir Hugh) Barnes (1896), Colonel C. E. Yate (1900), Sir A. H. M'Mahon (1907). The Agent to the Governor-General exercises judicial powers under the Frontier Crimes Regulation, and conducts the political administration of Baluchistān. He is also Inspector-General of Police and Levies. He has two Assistants, who are officers of the Political Department, and a personal Native Assistant of the rank of an Extra Assistant Commissioner. Other members of his staff are the Agency Surgeon and the Officer Commanding the Royal Engineers at Quetta, who is the Civil Secretary in the Public Works department.

Next in rank comes the Revenue Commissioner, who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration. He combines the functions of Settlement Commissioner, Superintendent of Stamps, Commissioner of Excise, Inspector-General of Registration and Jails, Registrar-General, and Judicial Commissioner; and he has the powers of a Local Government in the disposition of Local funds. Forest administration is also in his hands. For local and rural administration the Political Agency or District is the unit. Each District is divided into *tahsīls*, of which one or more constitute a subdivision. The village, which is often nothing more than the area occupied by a tribal subdivision, is the unit of management within the *tahsīl*. The Political Agent, who is also Deputy-Commissioner for such portions of his District as form part of British India, is the Collector, District and Sessions Judge, and the administrative head of his charge. He has frequently to deal with important trans-border affairs of a political character. Assistant Political Agents and Extra Assistant Commissioners or Native Assistants are in charge of subdivisions, supervise the collection of

revenue, exercise civil and criminal powers, and have the subordinate political control of the tribes in their respective areas. Each *tahsīl* is in charge of a *tahsīldār*, with an assistant styled *naib-tahsīldār*. A *naib-tahsīldār* holds charge of each sub-*tahsīl*. These officials are primarily responsible for the collection of the revenue, but they also exercise judicial powers. A *tahsīl* is distributed into circles, in which the *patwāri* represents the authority of Government. He is charged with the maintenance of settlement, crop and other records, supervises the maintenance of sources of irrigation, and assists in maintaining order. It is his duty to see that the headmen collect and pay the revenue demand punctually. The village headmen collect the revenue, assist in the appraisement of crops, and maintain order. They are generally remunerated by an allowance of 5 per cent. on the gross collections. The Sandeman system of offering allowances to headmen to maintain followers, by whose means they are expected to control their tribes, is freely employed. It is closely connected with the system of levy services referred to below. In 1904 five Political Agents, seven Assistant Political Agents, eight Extra Assistant Commissioners, and five Native Assistants were employed in District administration in the Province. There were also fourteen *tahsīldārs* and eighteen *naib-tahsīldārs*. A Cantonment Magistrate and an Assistant Cantonment Magistrate are posted to Quetta, and a Staff Officer performs the same duties in Loralai. A Munsif is stationed at Quetta and another at Sibi. The Director, Persian Gulf Telegraphs, is a Justice of the Peace for places along the coast, and also exercises certain political powers as an Assistant to the Political Agent in Kalāt.

Excluding Native States, the Province is divided into two main portions: British Baluchistān, and the territories administered by the Agent to the Governor-General, the latter being generally known as the Agency Territories. British Baluchistān includes the *tahsīls* of Shāhrig, Sibi, Duki, Pishīn with Shorarūd, and the Chaman subdivision, with a total area of 9,476 square miles. Agency Territories is an elastic term, including areas which are directly administered and also other tracts which are merely politically controlled. Of these, the directly administered areas cover 37,216 square miles, comprising the Quetta *tahsīl*, the Bolān Pass District, and the Nushki and Nasīrābād *tahsīls*, all of which have been leased from the Khān of Kalāt; the lands occupied by the railway from Jhatpat to Mithri, Nāri to Spīntangi, and Spezand to Sorosham; the Chāgai and Western Sinjrāni country; and the whole of the Zhob and Loralai Agencies, except the Duki *tahsīl* in the latter. The inhabitants of the last two tracts have placed themselves under British protection from time to time. Throughout these areas revenue is collected. The part of Baluchistān, therefore, including British Baluchistān, which is under direct administration,

covers 46,692 square miles, an area about the same size as Sind. It comprises six Districts—Quetta-Pishīn, Sibi, Loralai, Zhob, Chāgai, and the Bolān Pass. Each of the first four is in charge of a Political Agent and the fifth of a Political Assistant, while the Bolān Pass is administered by the Political Agent in Kalāt. The latter, with two Political Assistants, one of whom is *ex-officio* Commandant of the Makrān Levy Corps, controls the affairs of the Kalāt and Las Bela States. The Political Agent in Sibi exercises political control over the Marri and Bugti tribes and in the Lahri *niābat* of the Kalāt State, which is inhabited by the Dombki, Umrāni, and Kaheri tribes.

The Native States are two in number, KALĀT and LAS BELA, the latter being nominally a feudatory of the former. The Kalāt State consists of a confederacy of tribal groups headed by the Khān of Kalāt. These groups were originally organized into three great divisions: (1) the Khān's *ulus*, or following, which was scattered throughout the country; (2) the Sarawān tribesmen living to the north of Kalāt under their hereditary chief, the Raisāni Sardār; and (3) the Jhalawān tribesmen living to the south of Kalāt under the Zahri Sardār. All were liable to the Khān for military service. Succession to the *masnad* of Kalāt appears to have been by inheritance, subject to the approval of the chiefs and of the paramount power. Gross incompetence might exclude. In external affairs the Khān was supreme and absolute. Internally each of the Sarawān and Jhalawān tribes retained the fullest rights of self-government, but by the unwritten rule of the constitution there was a general right of interference by the Khān. The Khān, through his *naibs* or deputy-governors, managed the affairs of those people from whom he collected revenue. Khārān was, and still is, quasi-independent. These arrangements have, however, been modified by lapse of time.

The relations of Kalāt with the British Government are governed by two treaties, those of 1854 and 1876. The treaty of 1876 reaffirmed the treaty of 1854. Under the terms of the earlier treaty a subsidy of Rs. 50,000 was payable to the Khān, which was raised to 1 lakh in 1876. At the same time the Khān agreed to act in subordinate co-operation with the British Government; a British Agency was re-established at the Khān's court with certain powers of arbitration; and the presence of British troops in Kalāt was permitted. The construction of railways and telegraphs and freedom of trade were also provided for. There are further agreements with Kalāt in connexion with the construction of the Indo-European Telegraph, the cession of jurisdiction on the railways and in the Bolān Pass, and the permanent lease of Quetta, Nushki, and Nasīrābād. A Political Agent was permanently reappointed to Kalāt in 1884, to keep touch with

the Khān and to exercise the right of arbitration already referred to. The Khān is entitled to a salute of nineteen guns.

The relations of the Brāhui tribesmen with the Khān are now regulated by the Mastung agreement, the treaty of 1876, and the custom which has arisen therefrom. In the Mastung agreement the Sarawān and Jhalawān Sardārs declared their submission and allegiance to the Khān, the Khān on his part restoring to them their ancient rights and privileges and promising good treatment so long as they proved loyal and faithful. Difficulties having arisen in cases where disputes had occurred between the Khān's deputies, as representing his subjects, and the Brāhui tribesmen, such disputes were to be referred to the Khān for inquiry and decision, and, in case of disagreement, the disputed point was to be left to the arbitration of the British Government. The rights of internal self-government previously possessed by the tribesmen remained intact. In 1879 service and allowances were granted by the British Government to the Sarawān chiefs, in personal recognition of their loyal behaviour during the second Afghān War. To assist in the administrative control of the tribes, a Native Assistant for Sarawān was appointed in 1902.

The Khān is assisted in the general administration of his State by a Political Adviser, whose services are lent by the British Government. The affairs of the Jhalawān country, in which certain tribal subsidies are paid by the Khān, are supervised by a Native Assistant also lent by the British Government, who is stationed at Khuzdār. The country, other than tribal, in which the Khān exercises control and collects revenue is divided into *niābats*. Makrān is under the control of an officer known as the *nāzim*. Each of the *niābats*, of which there are nine, was formerly in charge of a *naib* or deputy-governor. The Mastung *niābāt* and the five *niābats* of Kachhi are supervised by four *tahsīldārs* or *mustaufis*, who are represented locally by deputies, called *jā-nashīn*. This system was introduced in 1902, but in some cases the *naib* has been retained and exercises jurisdiction concurrently with the *jā-nashīn*. Important civil cases are heard by the Political Adviser. The *mustaufis* hear civil suits up to Rs. 10,000 in value, and *naibs* and *jā-nashīns* suits of lower value on a graded scale. Court-fees are levied at 10 per cent. *ad valorem*. Criminal cases are dealt with by the Political Adviser on the basis of tribal custom.

The chief of Las Bela, known as the Jām, is bound by agreement with the British Government to conduct the administration of his State in accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalāt. Sentences of death must be referred for confirmation. The Jām also employs an approved Wazīr, to whose advice he is subject, and who generally assists him in the transaction of state business. For purposes of

administration the State is divided into seven *niābats*. The *naib*, or officer in charge, inquires into petty judicial cases, and collects transit-dues and the land revenue after it has been appraised by the revenue establishment. He submits all cases for the orders of the Jām. The revenue arrangements are in the hands of a *tahsīldār*, assisted by a head revenue *naib* and other *naibs*.

Legislation and justice.

Acts and Regulations are extended to British Baluchistān either under the Scheduled Districts Act (XIV of 1874) or by special mention in the Act itself, and are applied to the Agency Territories by the Governor-General-in-Council under the Indian (Foreign Jurisdiction) Order in Council, 1902. Enactments peculiar to Baluchistān are the Laws Law, the Civil Justice Law and Regulation, the Criminal Justice Law and Regulation, and the Forest Law and Regulation, all passed in 1890. The Civil and Criminal Justice Laws and Regulations were modified in 1893, and re-enacted in 1896, when the post of Judicial Commissioner was created. He is the High Court for Baluchistān, but sentences of death passed or confirmed by him require the sanction of the Local Government. In proceedings against European British subjects the Punjab Chief Court is the High Court. Each District is a Sessions division, the District Magistrate being the Sessions Judge, who may take cognizance of any offence as a court of original jurisdiction without previous commitment by a magistrate. The trial may take place without jury or assessors. Assistant Political Agents, Extra Assistant Commissioners, and Native Assistants ordinarily have the powers of a magistrate of the first class; *tahsīldārs* those of the second class, and *naib-tahsīldārs* those of the third class. The Cantonment Magistrate, Quetta, exercises first-class powers; and the Cantonment Magistrate, Loralai, and the Assistant Cantonment Magistrate, Quetta, possess second-class powers. The limit within which sentences are not appealable has been raised in cases tried by Courts of Sessions and certain magistrates.

The civil courts are of five grades: courts of *naib-tahsīldārs*, with jurisdiction up to Rs. 50; of *tahsīldārs* and Munsifs, with jurisdiction up to Rs. 300; of Assistant Political Agents, Extra Assistant Commissioners, and Native Assistants, with jurisdiction which may extend up to Rs. 10,000; and of Political Agents, without limit of pecuniary jurisdiction. The Judicial Commissioner constitutes the highest appellate authority. Appeals from the orders of a *naib-tahsīldār*, *tahsīldār*, or Munsif ordinarily lie to the subdivisional officers concerned. The Cantonment Magistrate and Assistant Cantonment Magistrate at Quetta and certain other officers preside over Courts of Small Causes. In questions relating to certain specified subjects, the civil courts are bound to have regard to tribal custom, where such custom is inconsistent with ordinary Hindu or Muhammadan law. No legal practitioner can appear

in any court without the sanction of the Local Government. The number of cases disposed of is shown in the following table. Nearly half the number of criminal cases are of a petty nature. The decline in the number of civil cases is due to the completion of the large railway and other works.

	Criminal.			Civil.				Revenue and Miscellaneous.
	Total.	Appellate.	Original.	Total.	Appellate.	Original.	Execution of decree.	
Annual average for five years ending 1897-8.	3,700	119	3,581	10,848	258	6,767	3,823	2,397
Annual average for three years ending 1900-1.	3,917	171	3,746	8,010	199	4,741	3,070	2,555
1902-3	4,161	106	4,055	7,340	174	4,385	2,781	4,064

The indigenous system of referring disputes to a council of tribal elders or *jirga* has been developed under British administration, the Punjab Frontier Crimes Regulation[1] having been applied for this purpose in 1890. Local cases are referred to local *jirgas*, while intertribal and other important cases are decided by *Shāhi jirgas* which meet twice a year at Sibi and Quetta. A *Shāhi jirga* is also held once a year at Fort Munro, for the disposal of inter-Provincial cases between the Punjab and Baluchistān. These periodical assemblies have to decide cases of blood-feud, murder, important land disputes, &c., which, if unadjusted, would probably lead to bloodshed, loss of life, and political complications. During the five years ending March, 1898, the average annual number of cases thus disposed of was 2,871; in the succeeding three years the average number was 3,049. The actual number of cases in 1902-3 was 4,230. The Murderous Outrages Regulation was extended to Baluchistān in 1902. Under its provisions a fanatic guilty of murder may be sentenced to death or transportation or imprisonment for life in India; to forfeiture of property; and to whipping, in addition to transportation or imprisonment. It also authorizes the enforcement of tribal and village responsibility. During the ten years ending 1902 the number of murderous outrages on Europeans was nine and on natives of India sixteen.

The registrars under the Indian Registration Act are District officers, and the sub-registrars are generally *tahsīldārs*. In 1893-4 the number of registrars was 3 and of sub-registrars 12; 632 documents were registered, registration being compulsory in the case of 425. In 1902-3 the number of offices was 19 and the number of documents registered 868.

[1] The Frontier Crimes Regulation III of 1901 has since been applied to Baluchistān, with certain modifications.

The Provincial finances are managed in accordance with a quasi-Provincial settlement framed by the Government of India. The first settlement was made for a period of five years commencing in 1897; the terms were slightly modified and renewed for a similar period in April, 1902.

Finance.

Under native rule the only items of revenue, other than that derived from land, consisted of transit-dues (*sung*), fines, and, in some places, grazing tax. The amount realized cannot be ascertained. The transit-dues were either taken by the State, or shared between the State and the tribal chiefs, or pocketed by the chiefs themselves. They have now been abolished in all Administered areas. On the first arrival of the British, the *niābat* of Quetta was managed by British officers on behalf of the Khān of Khalāt from 1877 to 1883. During this period the annual revenue averaged Rs. 47,674. From April 1, 1883, the revenues of Quetta were treated as an Excluded Local Fund for one year; but afterwards, up to 1891, they were brought into the regular accounts of the Government. During these years the revenue averaged Rs. 1,46,000 per annum. In April, 1891, the Agent to the Governor-General was permitted to exercise the powers of a Local Government for two years in respect of the revenues of Quetta District, which were entirely made over to him. Meanwhile the provincialization of the Police and Levies, except those in the Zhob valley, had been authorized; the Bori, Bārkhān, and Zhob valleys had come under control and the Zhob Levy Corps had been constituted, and the general control of the revenue and expenditure in each case had also been made over to the Local Government. In 1893, therefore, a consolidated contract was sanctioned which included the four existing contracts, and an assignment of Rs. 8,65,000 per annum for a period of four years was granted. This was raised later on by Rs. 600 per annum. During the four years 1893-7 the receipts, excluding the Imperial assignment, averaged Rs. 5,70,550, and the expenditure Rs. 14,20,000 annually. The revenue and expenditure of Thal-Chotiāli—i.e. Duki, Sibi, and Shāhrig—and of Pishīn, which areas had been declared to be British Baluchistān, had throughout this period been treated as Imperial. Their revenue from 1883 to 1890 averaged Rs. 3,40,000, and from 1890 to 1897 Rs. 3,67,000 per annum.

From April 1, 1897, the whole revenue and expenditure of the Province, classified under certain specified heads, was provincialized, the settlement being sanctioned for a period of five years. The standard figure of revenue was fixed at Rs. 9,89,000, and that of expenditure at Rs. 22,34,000. The latter was afterwards increased to Rs. 22,74,000, owing to the arrangements made in connexion with Chāgai District. Under this settlement the Agent to the Governor-General exercises the powers usually given to Local Governments under the scheme of Pro-

vincial finance, and is subject to the rules of financial procedure which have been applied to Local Governments. The balance at the close of each year is carried on to the next. The expenditure on levies may not be materially reduced below Rs. 8,27,000 per annum without special sanction. The revenue includes that from salt made locally, usually an Imperial item; the only head of revenue classed as Imperial is interest. Under expenditure, the items (*a*) Ecclesiastical, (*b*) Territorial and Political Pensions, and (*c*) Political Salaries, are treated as Imperial. Territorial and political pensions include sums payable to persons of political importance. The salaries of Political officers borne on the Foreign Department list, of the Agency Surgeon and Assistant Surgeon at Kalāt, and of all Extra Assistant Commissioners and Native Assistants, except the Extra Assistant Commissioner, Quetta, and the Native Assistant, Sarawān, are debitable against the head Political Salaries.

The ultimate result of the first provincialized settlement was a debit balance of Rs. 43,312. The average revenue amounted to only Rs. 9,36,000, about half a lakh less than the standard figure; on the other hand the expenditure was reduced to an average of Rs. 22,39,000 per annum, against the estimated standard figure of Rs. 22,74,000. A decrease occurred under almost all heads of revenue, especially from land revenue and stamps. It was only from irrigation that an increase occurred, amounting to about Rs. 6,000. The standard figure of land revenue was Rs. 6,19,000; but, owing to a series of dry years, culminating in actual drought in 1900–1, the realizations averaged Rs. 5,85,000, or about Rs. 33,000 less than the estimate. Stamp revenue also fell below the estimate by about Rs. 31,000. Owing to the expansion of the Province, there have been increases in the establishments for the collection of land revenue and for general administration, and in the expenditure on levies. By the reorganization of the Forest department a saving of about Rs. 14,000 has been effected. Owing to the peculiar circumstances of the Province, the allotment for public works constitutes the only reserve from which expenditure in times of scarcity can be met. All other charges are practically fixed. During the quinquennial period the amount spent on public works was less than the standard by about Rs. 50,000. Of the average sum of Rs. 3,75,000 expended on public works, about one-third was devoted to repairs and the remainder to original works. The greater part of the assigned revenues was thus shown to be stationary, while the expenditure on public works, and especially on roads, was unduly curtailed. In the renewed settlement of 1902 an increase in the Provincial assignment was sanctioned, to enable the provincialized services to be maintained in a state of efficiency and internal communications to be developed. The annual assignment now amounts to a total of 15 lakhs per annum.

The following tables give the average revenue and expenditure

under main heads for the quinquennial period ending March, 1902, and the actuals for the two years 1900-1 and 1902-3:—

Heads of revenue.	Average for the quinquennial period ending 1902.		Actuals for 1900-1.		Actuals for 1902-3.	
	Total amount raised in Province.	Total amount credited to Provincial revenues.	Total amount raised in Province.	Total amount credited to Provincial revenues.	Total amount raised in Province.	Total amount credited to Provincial revenues.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Land revenue	5,85,000	5,85,000	6,05,000	6,05,000	5,40,000	5,40,000
Stamps	63,000	63,000	61,000	61,000	65,000	65,000
Excise	1,37,000	1,37,000	1,51,000	1,51,000	1,27,000	1,27,000
Forests	16,000	16,000	17,000	17,000	19,000	19,000
Interest	5,000	...	5,000	...	9,000	...
Other sources	1,35,000	1,35,000	1,20,000	1,20,000	1,02,000	1,02,000
Total	9,41,000	9,36,000	9,59,000	9,54,000	8,62,000	8,53,000
Assignment from Imperial revenues	...	12,74,000	...	12,85,000	...	16,98,000
Grand total	9,41,000	22,10,000	9,59,000	22,39,000	8,62,000	25,51,000

Heads of expenditure.	Average for the quinquennial period ending 1902.	Actuals for 1900-1.	Actuals for 1902-3.
	Rs.	Rs.	Rs.
Opening balance	20,000	− 17,000	− 43,000
Charges in respect of collection (principally land revenue and forests)	1,80,000	1,86,000	1,95,000
Salaries and expenses of civil departments—			
(*a*) General administration	3,36,000	3,34,000	3,52,000
(*b*) Law and justice	71,000	77,000	70,000
(*c*) Police	2,49,000	2,63,000	2,60,000
(*d*) Levies, including postal levies	8,54,000	8,75,000	8,79,000
(*e*) Education	9,000	9,000	10,000
(*f*) Medical	50,000	57,000	57,000
(*g*) Other heads (scientific and minor departments)	2,000	2,000	51,000
Pensions and miscellaneous civil charges (including political pensions)	9,000	7,000	16,000
Irrigation	30,000	21,000	81,000
Civil public works	3,75,000	3,18,000	3,97,000
Other charges and adjustments, refunds and drawbacks	2,000	2,000	1,000
Assignments and compensations	72,000	77,000	78,000
Total	22,39,000	22,28,000	24,47,000
Closing balance	− 9,000	− 6,000	+ 61,000

The land tenures of the Province are of a very simple character. In a few tracts the organized and corporate system originating in tribal conquest and territorial allotment, often in the shape of compensation for blood, still exists. The land appears to have been divided originally into groups of holdings forming the several shares of the different tribal subdivisions. In course of time, however, successive distributions have resulted in individual proprietorship, which is now almost universal. Such proprietors have full control over their property and the right of alienation. In some parts periodical division of land and water still takes place. In others, where there is little water in proportion to the amount of land, the water is permanently divided, while the land is owned jointly and apportioned for each crop. In irrigated tracts the proprietor is frequently the cultivator. If he leases his land, it is only as a temporary measure. In flood- and rains-crop areas, where cultivation is possible only by embanking, it was formerly usual in the highlands for an owner to assign the proprietary right in a portion of the land embanked, generally a half or a quarter, to the person making the embankment. This system is falling into desuetude in proportion as the value of land is appreciated, and temporary written leases are now generally granted. In low-lying tracts a cultivator who makes an embankment pays the proprietor a fixed share in the produce (*hakki-topa*) and acquires an alienable occupancy right.

Land revenue.

Revenue was levied in Mughal times partly in cash and partly in kind. The tribes were also required to furnish a specified number of horsemen and footmen. In 1590 Duki, Pishīn, the Harnai valley, Shorarūd, and Quetta were included in the *sarkār* of Kandahār, and Sibi in the *sarkār* of Bhakkar. Besides revenue in cash and kind, the value of which may be estimated at about $1\frac{1}{2}$ lakhs of rupees, these areas furnished 4,750 armed horsemen and 6,400 footmen. Immediately previous to the advent of the British, various systems prevailed in different parts of the country. Tribes far remote from the head-quarters of the provincial governors paid only an occasional sheep or goat to the tribal chief, who carried a small *nazarāna* or present to the local governor. In those districts which were under more immediate control and had originally furnished armed men, this service had been commuted into a cash payment known as *gham-i-naukar*. In some places a fixed amount in cash or kind, known as *zar-i-kalang*, was levied, but a complicated system of *batai* or sharing of grain was the more general method of taking revenue. The share realized varied from one-third to one-tenth, and resort was sometimes had to appraisement. A host of cesses were also levied, including payments for the *naib* or agent, the weighman, the seal-man, and the crop-watcher. The total amount thus exacted appears to have seldom

amounted to less than one-half of the produce. The *batai* system still survives in this form in the Kalāt State.

Under British rule no attempt has yet been made to enforce entire uniformity in revenue management. Existing methods have been taken as the basis for introducing an improved system, and great care has been exercised not to cause discontent among the people. The present methods of realizing land revenue are as follows: (*a*) cash assessments fixed for a term of years (*jamabast*); (*b*) temporary assessments (*ijāra*); (*c*) division of the produce (*batai*); (*d*) appraisement of the standing crops and levy of revenue in kind (*tashkhīs* or *dānabandi*); and (*e*) estimation of the Government share in cash after measurement of a portion of the crops (*tashkhīs-i-nakdi*). In the last three cases the Government share varies, the highest rate being one-third and the lowest one-eighth. The usual rate is one-sixth. Where revenue is taken in kind, an amount of fodder equal to the grain is also generally realized. As a result of inquiries into the existing revenue system made in 1882, orders were issued for making summary settlements, village by village, for the removal of irritating fees, and for the conversion in special cases of grain dues into cash. At this time the usual share of produce taken in irrigated lands was one-third; but in 1887 this rate was reduced, and about the same time the Government of India recommended the introduction of fixed assessments throughout the Agency. It was found impossible to effect this change immediately, and an option was therefore given to the cultivator to pay the revenue in kind or the equivalent of the crop assessment in cash. As new areas have come under control, *batai* revenue has usually been levied at one-sixth, and the cultivator is found to prefer this system with all its drawbacks to cash payment.

Settlement work was begun in 1902 and is still in progress. The record-of-rights has covered the *tahsīls* of Quetta, Pishīn, Hindubāgh, Kila Saifulla, Bori, Shāhrig, Sibi, and Sanjāwi. A fixed cash assessment has been introduced only in the Quetta, Pishīn, Shāhrig, and Sanjāwi *tahsīls*. This being the first settlement and the data available being scanty, the methods followed have been summary. Keeping in view the fact that only a light assessment was required, the Settlement officer fixed the revenue after personal inspection and after calculation of the average out-turn of the principal crops, the valuation of the Government share being ascertained at the average prevailing prices. Regard has also been had to the proximity of markets, the quality of irrigated lands, the nature of the soil, and the number of crops usually obtained. In rains-crop areas the introduction of a fluctuating grain assessment, proposed by the Government of India, has not yet been found practicable; and when a cultivable 'dry-crop' area forms even a large addition to an irrigated estate it has, as a rule, not been found worth while to assess it.

Extensive tracts have been formed into separate estates, which are subject to *batai*. The period of assessment is usually ten years, but this has been extended to twenty in Pishīn. In settled *tahsīls* the incidence per acre on the irrigable area varies from about 7 annas to about Rs. 3-9-0, and on the area actually irrigated from Rs. 1-5-3 to Rs. 5. The assessments are on the whole low. They generally follow the shares in water, but are sometimes fixed on areas also. Individual holders are in all cases responsible for payment of the revenue. The ordinary term of exemption for a new source of irrigation is ten years, and land brought under cultivation during the term of the settlement is not liable to revenue. The planting of fruit-trees is also encouraged. The proprietary right in land acquired by confiscation under native rule has now passed to the British Government, and it has been granted to cultivators at rates which cover both land revenue and the proprietor's share of the produce. In pre-British days, the state was considered the owner of all grazing lands; and in the draft Land Revenue Regulation, which is now under consideration, a provision has been inserted giving the Government the presumptive right in all lands comprised in unclaimed and unoccupied waste. The Punjab Land Revenue Act, XVII of 1887, has been applied with modifications to Quetta and Pishīn, and rules have been issued for the maintenance of records. For this purpose an establishment of *kānungos*, *patwāris*, &c., is maintained.

Grazing tax (*tirni*) has been levied everywhere since 1890, except in the Bolān, the Nasīrābād *tahsīl*, and Nushki. In the latter District only nomads from Afghān territory are liable. Rates vary from one anna for a sheep or goat to Rs. 1-8-0 for a female camel. Plough and milch cattle are exempt. The tax is collected by annual enumeration or by annual contract without actual counting. It yielded Rs. 88,682 in 1903-4, or about 13 per cent. of the aggregate land revenue.

The total land revenue in 1900-1, including Rs. 4,394 collected as grazing tax from Powindas on their way to the Punjab, and payable to that Administration, was 6 lakhs, which gives an incidence of Rs. 1·96 per head of total population and Rs. 2·27 on the rural population. Of this, 1·7 lakhs was collected by cash assessment and 3·4 lakhs by division of crops. The annual value in 1901 of the Government revenue alienated in revenue-free grants was Rs. 88,783. Most of these grants constitute a relic of Afghān times, and are held by privileged classes, such as Saiyids. Under British rule they have sometimes been made to persons for services rendered, or to chiefs to enable them to support their position or compensate them for the loss of former privileges. They consist either of an assignment of the whole or of a fixed proportion of the revenue on certain lands, of fixed allowances in grain, or of remissions of grazing tax. Remissions or suspensions of revenue

are given in tracts under fixed assessment only in years of drought or damaged crops, and are based on the proportion of the area in which crops have failed. Remissions of grazing tax are also allowed. Under the Civil Justice Law agricultural land may not be sold in execution of a decree without the sanction of the Local Government, and the draft Land Revenue Regulation contains provisions limiting the power of alienation of such land to non-agriculturists.

Miscellaneous revenue.

The opium revenue is derived entirely from vend fees. The cultivation of poppy is prohibited, and opium required for local consumption is imported from the Punjab by licensed vendors who make their own arrangements for procuring it. No import duty is levied. The exclusive right of retailing opium is disposed of annually by auction for each District, the number of shops being limited. The sale of opium and poppy-heads for medicinal purposes is also regulated. The consumption of opium in 1900–1 was about 16 maunds, and in 1902–3 about 15 maunds.

The salt consumed in Baluchistān consists of earth-salt manufactured in the Province, and rock-salt. The latter is imported by rail, in small quantities only, owing to the competition of untaxed local salt. The imports of rock-salt averaged about 800 maunds during the three years ending 1900; the imports in 1900–1 reached 1,142 maunds. The wholesale price at Sibi is about Rs. 3–12–0 and at Quetta Rs. 4–9–0 per maund. Punjab rock-salt is used in the towns and bazars by the non-indigenous civil and military population, while the local earth-salt is used by the tribesmen. The latter pays duty on importation into Administered areas at Rs. 1–8–0 per standard maund. Local salt on importation into Quetta town pays duty at Rs. 1–8–0, but in Pishīn bazar and Kila Abdullah the rate is R. 1. No tax is levied on earth-salt produced in Zhob, Loralai, or Chāgai. In the Native States the right of manufacture is generally given on contract. No preventive establishments are anywhere maintained. The annual revenue from salt from 1897 to 1900 averaged Rs. 3,670. In 1900–1 it was Rs. 3,383, and in 1902–3 Rs. 3,151.

The cultivation of hemp has been absolutely prohibited in British Baluchistān since July, 1896. In the Kalāt highlands its cultivation appears to be on the increase. *Charas* and *bhang* are imported into British territory in small quantities from Afghānistān and Kalāt, and have been subject to import duty since 1902. The main supply of *charas* comes from the Punjab, while *bhang* and *gānja* are supplied by Sind. *Bhang* is the only drug of which there is any considerable consumption. The consumption of intoxicating drugs in 1900–1 was as follows: poppy-heads, $3\frac{1}{2}$ maunds; *gānja*, 34 seers; *charas*, 30 maunds; and *bhang*, 119 maunds. In 1902–3 the consumption of poppy-heads amounted to $1\frac{1}{8}$ maunds; of *gānja* to 8 seers; of *charas* to $29\frac{1}{5}$ maunds;

and of *bhang* to 40¾ maunds. Separate annual contracts are given to licensed vendors for the wholesale and retail vend of intoxicating drugs. For medicinal purposes they are sold by licensed druggists. The incidence of revenue per head of population in 1900–1 was about one anna.

The manufacture and vend of country spirits are combined under a monopoly system. Each District forms a separate farm. The rights are generally disposed of annually by auction. The sale of rum is sometimes included in the contract. Manufacture is carried on under the out-still system.

The out-turn of the brewery at Quetta averaged 212,977 gallons of beer per annum between 1891 and 1900, of which 170,460 gallons were supplied to the local Commissariat department. The quantity brewed was 238,572 gallons in 1901, and 347,220 gallons in 1903. Up to 1897 malt liquors supplied to the Commissariat department were, as a special case, free of duty. One anna per gallon is now levied.

Foreign liquors, including spirit manufactured in other parts of India after the English method, are sold under wholesale and retail licences, which are granted on payment of fixed fees of Rs. 32 for wholesale vend and from Rs. 100 to Rs. 300 for retail vend. Retail vendors may not sell by the glass. Rates varying from Rs. 6 to Rs. 200 per annum are charged for licences for places of refreshment.

The excise revenue from various sources has been as follows:—

	Average of ten years ending 1899–1900.	1900–1.	1902–3.
	Rs.	Rs.	Rs.
Country liquors, including beer and rum	1,00,980	1,05,177	94,239
Opium	17,359	17,490	12,495
Drugs	18,569	21,291	17,415
Foreign liquors	3,998	3,678	2,845
Total	1,40,906	1,47,636	1,26,994

The incidence per head is about seven annas. The consumption of intoxicating liquors and opium is confined to the foreign population. Hemp drugs are used to some extent by the people of the country. There appears to be a tendency among the educated classes to consume foreign liquors in preference to country spirits.

The net stamp revenue during the nine years 1891–1900 averaged Rs. 76,600. In 1900–1 it was Rs. 59,000, and in 1902–3 Rs. 62,600. About two-thirds of the total is derived from judicial and one-third from non-judicial stamps.

The Income Tax Act (II of 1886) has not been applied to Baluchistān. British subjects in the service of the Government of India or of

a local authority, or who may be serving within Native States in the Province, are alone liable to the tax. The receipts during the three years 1897–1900 averaged Rs. 15,400 per annum; in 1900–1 they were Rs. 16,200, and in 1902–3 Rs. 17,300.

Quetta is the only municipality that has been formally constituted in Baluchistān. An octroi tax was levied by Kalāt officials before British occupation, which was continued after Sir R. Sandeman's arrival, a conservancy cess being added in 1878. The site of the town and civil lines was purchased by Government, and was subsequently assigned to the municipality under certain conditions. Up to the year 1893 the affairs of the town and its funds were managed by the Extra Assistant Commissioner at Quetta, controlled by the Political Agent. The Quetta Municipal Law came into force on October 15, 1896. The municipal committee consists of a chairman and not less than six nominated members. The Political Agent is *ex-officio* chairman, and the term of office of the members is one year. In March, 1904, the committee included five European *ex-officio* members and eight natives. During the four years ending 1901 the municipal income averaged 1·7 lakhs. The principal item is octroi, the receipts from which are about a lakh annually. Half of the net receipts from this source are paid over to the Quetta cantonment committee. Taking the population of Quetta town alone, the incidence of taxation is Rs. 12–4–1 per head; including that of the cantonment, however, it drops to Rs. 6–11–10. Quetta being surrounded by open country, the cost of collection of octroi is necessarily costly, amounting to more than 19 per cent. of the gross receipts in 1901. In 1903–4 the total income of the municipality had increased to 2·2 lakhs.

Local and municipal.

Seven 'excluded' Local funds have been created, known as the Sibi municipal fund, the Shāhrig District bazar fund (which includes the Ziārat improvement fund), the Pishīn Sadar and District bazar fund, the Loralai town fund (including the Duki and Bārkhān funds), the Fort Sandeman, the Nushki, and the Bolān bazar funds. These have been formed from time to time as new centres of trade sprang up and developed. The objects to which their income is devoted include local works and other measures of public utility, such as education and conservancy. The accounts, except in the case of the Sibi municipal fund, are governed by rules issued by the Government of India, and are audited by the Comptroller, India Treasuries. The Revenue Commissioner exercises with regard to their disposition the powers of a Local Government; the Political Agents are controlling officers, while the officers in charge of subdivisions (except in the Bolān, Pishīn, and Chaman) are the administrators. The total income of these funds during the four years ending 1901 averaged Rs. 1,18,000 per annum, and the expenditure

Rs. 1,14,000. No local rates are levied; but the principal source of income is octroi, which contributed an average of Rs. 62,700. One-third of the octroi receipts at Chaman, Loralai, and Fort Sandeman is paid over to the military authorities at these stations. The income of the funds in 1903–4 amounted to Rs. 1,07,000, and the expenditure to Rs. 1,01,000.

Quetta was declared a cantonment in 1883 and Loralai in 1897. The funds of each are administered by a cantonment committee. Their income consists chiefly of octroi and of grants-in-aid from Government, and is expended on objects similar to those of Local funds. During the four years ending 1901, the total income averaged Rs. 93,000 and the expenditure Rs. 92,000 per annum. In 1903 the income amounted to Rs. 1,25,600 and the expenditure to Rs. 1,39,700.

Public works.

The Public Works department has had a chequered career. Up to 1882 a Superintending Engineer was appointed under the immediate orders of the Local Government. From 1882 to 1885 the execution of civil works was entrusted to the Director-General of Military Works, the military Superintending Engineer being Secretary to the Local Government. From 1885 to 1889 public works were carried out by both military and civil agency, the civil Superintending Engineer being Joint Secretary to the Agent to the Governor-General. From 1889 to 1893 the civil Superintending Engineer was made Secretary for Public Works to the Local Government, and three civil divisions were created; the military Superintending Engineer was Joint Secretary and also controlled two Military Works divisions.

In 1893 all civil works were again entrusted to the military; and, owing to the importance of training Royal Engineer officers on the frontier and to the evils of a dual system, this arrangement still continues. Thus, the executive officers of the department of Military Works carry out both the civil and military works falling within their charges. The Commanding Royal Engineer, Quetta, is Superintending Engineer for all works and Secretary for Public Works to the Agent to the Governor-General. The Agency is divided into two sub-districts, each in charge of a Sub-District Commanding Royal Engineer. Subordinate to the Sub-District Commanding Royal Engineers are Garrison Engineers, who have charge of local areas. All works carried out on behalf of the civil authorities are executed as contribution works to the Military Works department. For establishments, tools, and plant, and cost of audit a fixed sum of 24½ per cent. on the cost of all works is credited to the Military Works services. A payment of Rs. 2,300 is also made on account of establishments engaged for the supervision of coal mines. A special irrigation Engineer has been recently appointed, whose pay is debitable to Provincial revenues.

The Commanding Royal Engineer, in his capacity as Superintending Engineer and Secretary to the Agent to the Governor-General, frames budget estimates, considers original 'major' works costing more than Rs. 2,500, and allots sums for 'minor' works. Sub-District Commanding Royal Engineers sanction original works costing not more than Rs. 2,500, which have been previously selected by the Governor-General's Agent, and dispose of the annual grants for repairs through Garrison Engineers. 'Minor' works costing not more than Rs. 200 in each case are disposed of by civil officers.

In the quarter of a century which has elapsed since its occupation, all the north-eastern part of the Province has been covered with a system of roads; bungalows and resthouses have been built at convenient places, and water-supplies have been provided in the principal head-quarters stations. Many of the most important of these schemes owe their inception and execution to military needs. Such are the Bolān road; the buildings in the cantonments at Quetta and Loralai; and the water-supplies at Quetta, Sibi, and Loralai. The Pishīn-Dera Ghāzi Khān and Harnai-Loralai roads, though carried out as civil works, are now maintained from military funds.

Of civil works, three canal systems, Shebo, Khushdil Khān, and the Anambār scheme, have been constructed at a total cost of 17·3 lakhs. An account of the most important roads and their cost has been given in the section on Communications. Among public buildings may be mentioned the Quetta Hospital, which consists of fifteen blocks for in-patients and has a splendidly equipped operating room, the whole erected at a cost of about Rs. 76,000; the administrative buildings at Quetta in which the District courts and treasury are located, which were completed in 1892 at a cost of about 2 lakhs, including later additions; the Church of England, which cost 2·8 lakhs; and the Roman Catholic Church, towards the erection of which a donation of Rs. 95,000 was given by Government. Two Residencies have been constructed for the Agent to the Governor-General. That at Quetta, which is one of the prettiest official residences in India, and cost 1·3 lakhs, was completed in 1893; the other is at Ziārat, the capital cost of which was about half a lakh. The Darbār Hall at Quetta, which contains a fine room for *darbār* purposes, was formerly used as the church, and cost about Rs. 92,000. The Public Works department has also constructed the Sandeman Memorial Hall at Quetta and the Victoria Memorial Hall at Sibi, in which the *Shāhi jirgas* are held. The former cost 1·1 lakhs, of which rather less than half was raised by private subscription, and the latter Rs. 38,800.

The only municipal drainage scheme of importance is that in Quetta town, on which about 1·1 lakhs has been expended on capital account. Permanent open drains have also been constructed in Sibi and Fort

Sandeman. Piped water-supplies exist at Quetta, Fort Sandeman, Loralai, Sibi, Chaman, and Ziārat.

Quetta was originally occupied in 1839, but was evacuated at the conclusion of the first Afghān War. On the outbreak of the second Afghān War in 1878 it was used as the base of operations, and troops held Pishīn, Quetta, and the line of the Bolān from Sibi. Loralai was occupied in 1886, and Chaman in 1889. Fort Sandeman was garrisoned in 1890.

Army.

Quetta is the head-quarters of the fourth division of the Western Command. The troops in Baluchistān are under the divisional head-quarters direct, and a brigade under a colonel on the staff is located in Sind. The division is commanded by a major-general. The troops in the Province consisted in 1903 of three mountain batteries, two companies of garrison artillery, two British infantry regiments, three native cavalry regiments, six native infantry regiments, and one company of sappers and miners. The total strength of troops on June 1, 1903, was 2,650 British and 7,121 Native; total, 9,771. The greater part of the garrison is quartered at Quetta and in a number of outposts; the remainder is distributed at Loralai, Fort Sandeman, and Chaman, each of these stations being garrisoned by native infantry and cavalry. In addition to the regular troops, a local company of volunteers and a company of North-Western Railway volunteers have been raised. They possessed 175 members on their rolls in 1891, 196 in 1901, and 236 in 1903.

Quetta itself is very strongly fortified by works which, with the support of the two lines of railway, render it practically impregnable. The fortifications were first designed in 1883, and have since been extended and improved. It contains an arsenal, and the Indian Staff College was opened in 1907.

The division possesses five local regiments, three of cavalry and two of infantry. The cavalry consists of the Scinde Horse, Jacob's Horse, and the Baloch Horse, which are borne on the Army List as the 35th, 36th, and 37th Cavalry, and were raised in 1839, 1846, and 1885 respectively. The two infantry regiments are the 124th (Duchess of Connaught's Own) and the 126th Baluchistān Regiment.

The Province has the distinction of possessing one of the first of those corps of local militia which now bear so large a part in frontier management. The Zhob Levy Corps was raised in 1890, and consists of four squadrons of cavalry, aggregating 423 men, and six companies of infantry, aggregating 632 men, under a commandant, second-in-command, and adjutant of the regular army[1]. It guards a long line of frontier from Loiband on the west to Gul Kach on the east, a distance of about 180 miles, besides garrisoning several posts to protect Zhob from the

[1] Since 1905 the corps has been strengthened by the addition of 200 mounted men and one British officer, its total strength being raised to 1,275 men.

incursions of Mahsūd and other raiders. In 1902–3 the expenditure on the corps amounted to more than $2\frac{1}{2}$ lakhs. Details of the irregular forces maintained in Kalāt and Las Bela will be found in the articles on those States.

The policy of making the inhabitants responsible for the security of the country and frontier has been developed into what is known as the levy system. Both levies and police are worked side by side; but the duties of the latter are, so far as possible, confined to guards and escorts, and to maintaining order in the towns and on the railway. Crime is investigated by the local headmen and levies, who are assisted by experienced deputy-inspectors of police and levies. This system is supplemented by the reference of cases to *jirgas* for decision by tribal custom. In 1904, 2,022 levies and 1,173 police were employed in directly Administered areas, being one man to 109 persons or 15 square miles.

The levy system owes its origin to Sir Robert Sandeman, who, when Deputy-Commissioner of Dera Ghāzi Khān District in 1867, took into Government service a small number of tribal horsemen from the Marris and Bugtis. These men were employed chiefly in keeping up communications between the chiefs and the British authorities. The system was extended, on Sir Robert Sandeman's arrival in Baluchistān, by offering the headmen allowances for maintaining a certain number of armed horse and foot, by whose means they were expected to keep order in their tribes and to produce offenders when crime occurred. It was based on the assumptions: firstly, that in every tribe there exist headmen of influence who, if effectually supported, can compel obedience; and, secondly, that no frontier tribesman can be expected to work for Government unless paid for it. The system thus started was expanded in 1883, when the organization was fully considered by a committee. At this time the Baloch Guide Corps was disbanded. It had been raised for service in Kachhi at the time of the first Afghān War in 1838, but was withdrawn within the Sind frontier in 1852 and transferred to Baluchistān in 1877[1].

The District officers control the levies, whose duties are many and various. Besides the detection and arrest of criminals, they guard communications, bring in witnesses, make inquiries, carry letters, produce supplies, escort prisoners, and assist in the collection of revenue. They are exclusively recruited from the local tribes, and are ordinarily employed within their own tribal limits. Each man has his own weapon, generally a sword, and is distinguished by a badge or turban. In some places the men are armed with Snider carbines. At central posts writers are stationed to conduct correspondence. The system cannot be gauged by the actual numbers employed, as the

[1] For a short account of the duties performed by this corps in Sind see *Baluchistān Blue Book* No. 2, p. 70.

grant of service entitles the Government to the assistance of the whole tribe in times of emergency and not merely to that of the few enrolled individuals. It is also an axiom that all persons drawing pay, whether chiefs or others, who are not pensioners, must render an equivalent in service. A few personal grants have been made for long and tried service, but these are exceptional. Reference has already been made to the condition in the Provincial settlement that the expenditure on levies shall not be materially reduced below Rs. 8,27,000. This sum includes the cost of the Zhob Levy Corps, the expenditure on which amounts to more than $2\frac{1}{2}$ lakhs of rupees. Full statistics of the force of levies employed at different periods will be found in Table II at the end of this article (p. 342). In 1904 the total number of effective levies working in the Province, excluding the Zhob Levy Corps and those employed on postal duty, amounted to 2,130, and cost about Rs. 5,86,000 per annum.

Police and jails.

Police have been recruited from time to time as necessity demanded. In 1882 the total number of police was 516, but no special officer had been appointed to supervise them. In 1889 the question of police administration was considered by a committee; but the system then initiated, by which the control of the force was handed over to Political Agents and Assistant Political Agents, was altered in 1897, when a European District Superintendent of police was appointed to Quetta-Pishīn and the railway. He has since been placed in charge of the Sibi District police. The Agent to the Governor-General is the Inspector-General of Police and Levies. In Zhob and Loralai an Inspector of police, who is also an Honorary Assistant District Superintendent, holds charge of the force. Statistics of the total force at different periods will be found in Table II at the end of this article (p. 342). In 1904 the total strength of the police was 1,173 of all grades, or one policeman to 41 square miles of directly Administered areas. The number of officers, inspectors, and deputy-inspectors was forty-two.

The police are chiefly recruited from natives of India, but local men are now beginning to join. A tendency exists among the latter not to serve continuously for long periods. Efforts are being made to enlist local men of good family in the higher grades. Anthropometrical measurements and finger-prints are not taken. The armament has hitherto consisted of Snider rifles with side-arms, for which Martini rifles are to be substituted. Much use is made of trackers, who frequently exhibit remarkable talent. The railways are divided into two subdivisions for police purposes. The number of police employed on them is 147, posted at 42 stations. This number is supplemented by 160 levies, making an aggregate of 307 men employed on 399 miles of line.

During the three years ending 1901, the average number of cognizable cases reported was 1,542. Of these cases, 1,055 were decided in the criminal courts, 948 ending in conviction and 107 in acquittal or discharge. Cases of serious crime, which would ordinarily be treated as cognizable in India, are, for political reasons, not always investigated by the police in Baluchistān, but are placed before tribal *jirgas* for award.

The Revenue Commissioner is Inspector-General of Jails. The Province possessed two District jails and fourteen subsidiary jails in 1900–1, capable of accommodating 490 male and 93 female prisoners. Details of the prison population, &c., are given in the following table:—

	District jails.	Subsidiary jails (Lock-ups).	Average daily jail population.			Rate of jail mortality per 1,000.	Expenditure on jails and maintenance of prisoners.	Cost per prisoner.
			Males.	Females.	Total.			
							Rs.	Rs.
1891–2 .	1	5	93*	3†	96*	41	12,831	133
1895–6 .	2	12	127*	2†	129*	42†	14,320	104
1900–1 .	2	14	247	11	258	47†	23,034	96

* Includes figures for the Sibi and Harnai jails only in the Thal-Chotiāli (now Sibi) District.

† Includes figures for the Sibi subdivision only in the Thal-Chotiāli (now Sibi) District.

NOTE.—No figures are available for the Bolān Pass.

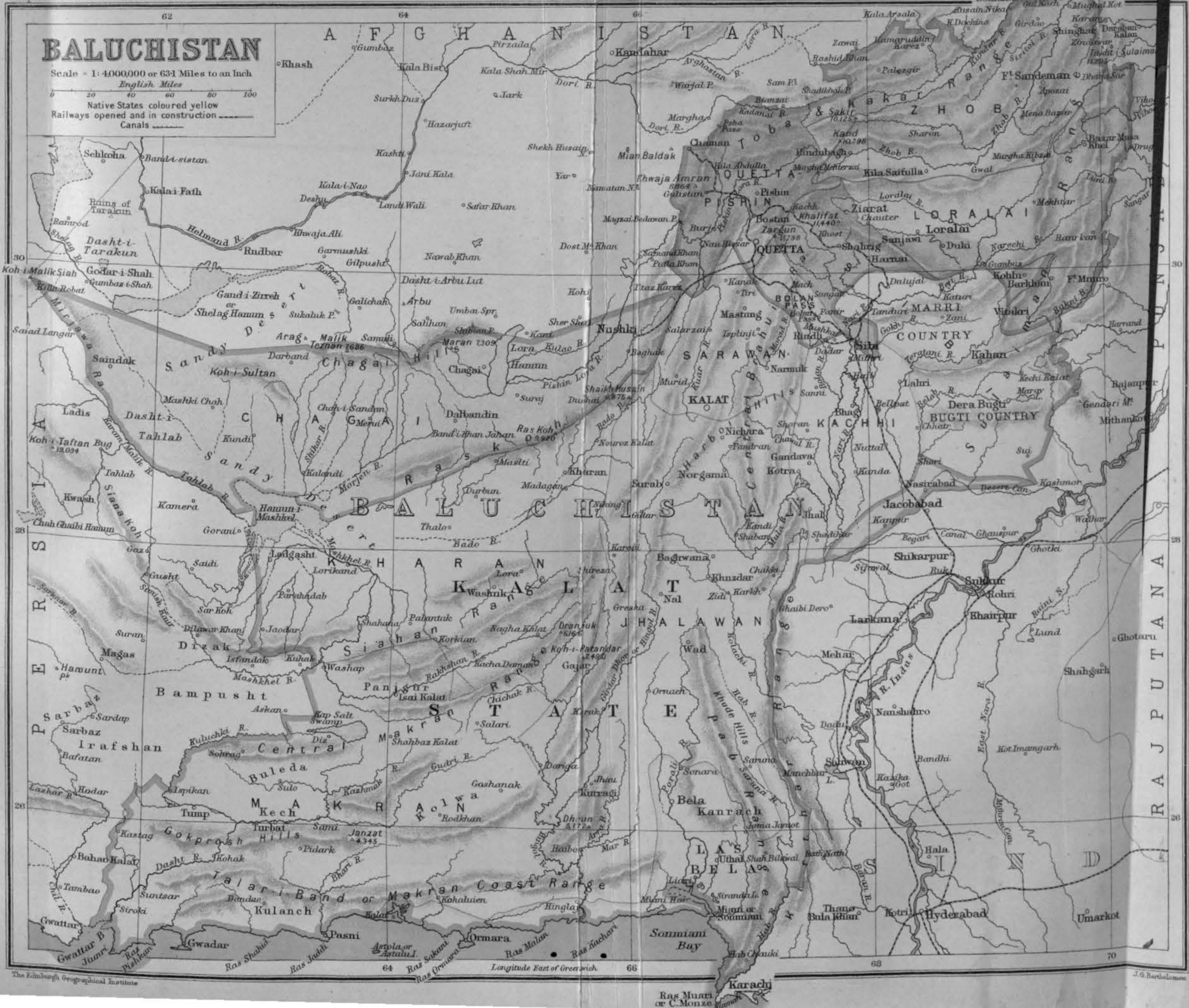
The principal causes of sickness among the prisoners are malaria, dysentery, and pneumonia in winter. The diet is much the same as in the Punjab, the Jail Manual of which Province is followed *mutatis mutandis*. Prisoners whose term exceeds six months are ordinarily sent to Shikārpur in Sind, under arrangement with the Bombay Government.

No industries are carried on in the local jails, except in Quetta and Sibi, where coarse blankets are woven for the bedding and clothing of prisoners. Juvenile prisoners are sent to the reformatory at Shikārpur.

Education.

Education has as yet made little progress, and a department of Public Instruction is only now being organized by an Inspector-General of Education appointed jointly for the Frontier Province and Baluchistān. Secondary education is represented by one high and one Anglo-vernacular middle school. The number of boys in these two schools was (1891) 27, (1901) 103, and (1903) 87. They are principally maintained from Local funds, but receive pecuniary aid from Government.

The primary schools attached to the middle schools are Anglo-vernacular, in so far that English is taught in the two higher classes of the primary department. In all other primary schools the medium of instruction is Urdū, and the subjects are Urdū, Persian, geography,


BALUCHISTAN
Scale = 1:4,000,000 or 63·1 Miles to an Inch
English Miles
0 20 40 60 80 100
Native States coloured yellow
Railways opened and in construction
Canals
AFGHANISTAN
PERSIA
PUNJAB
RAJPUTANA
SIND
BALUCHISTAN
KALAT STATE
KHARAN
CHAGAI
JHALAWAN
SARAWAN
KACHHI
MAKRAN
LAS BELA
ZHOB
LORALAI
QUETTA-PISHIN
MARRI COUNTRY
BUGTI COUNTRY
Kandahar
Quetta
Kalat
Karachi
Jacobabad
Shikarpur
Sukkur
Rohri
Hyderabad
Kotri
Larkana
Sibi
Nushki
Pishin
Chaman
Loralai
Ft Sandeman
Gwadar
Pasni
Ormara
Sonmiani Bay
Ras Muari or C. Monze
Longitude East of Greenwich
62
64
66
68
70
30
28
26
The Edinburgh Geographical Institute
J.G. Bartholomew

and arithmetic. The number of boys' schools has been three (1891), fourteen (1901), and twenty-one (1903). They contained 604 pupils in 1901 and 831 in 1903. Difficulties are experienced in obtaining qualified teachers, who generally have to be recruited from the Punjab. Their pay varies from Rs. 25 to Rs. 35 a month. A rough estimate shows that the number of pupils under instruction in mosque schools in 1901 was 2,256 boys and 313 girls.

The number of female schools and pupils has been one school with 61 pupils (1891), three schools with 170 pupils (1901), and four schools with 240 pupils (1903). Of the four schools, two are maintained from Local funds and two by private bodies. Of the latter, one is aided from Local funds and the other is a mission school. Each school is divided into three departments, Hindī, Gurmukhī, and Urdū, these languages being the medium of instruction. The Punjab system is followed, and sewing and knitting receive special attention. Almost all the girls attending these schools are from India. In 1901 the number of Hindu girls represented 82 per cent., and in 1903 72 per cent. of the total. The usual difficulties caused by early marriage and the *parda* system are the great hindrance to progress.

Two European schools contained 31 pupils (1901) and 53 (1903). Teaching on the Punjab system is given up to the middle department in one; the other is a primary school. In 1901 the total number of Muhammadan children under instruction was 434, including 28 girls. Indigenous children numbered 227. In 1903 the number of Muhammadan pupils had risen to 548, including 349 indigenous children.

The native population is too poor and uncivilized to appreciate the benefits of education, but special inducements are held out to them in the shape of stipends. The number of boarding-houses has risen from one accommodating nineteen residents (1901) to two accommodating thirty-two residents (1903). The census statistics afford no indication of the progress made in education. The Province is still very backward, absence of funds being the greatest drawback. It has not yet been found possible to charge fees in village primary schools. Educational expenditure during 1903-4 is exhibited in the table below:—

	Provincial revenues.	Local and municipal funds.	Fees and other sources.	Total.
	Rs.	Rs.	Rs.	Rs.
Secondary boys' schools	4,890	3,974	3,840	12,704
Primary " "	4,585	4,334	3,198	12,117
Girls' schools . .	180	4,534	2,468	7,182
Total	9,655	12,842	9,506	32,003

The *Baluchistān Gazette* is the only newspaper published in English, and is chiefly devoted to local news. No vernacular newspapers exist, and no books have been issued.

Medical.

Dispensaries were first opened at Kalāt and Quetta and a Medical Officer was appointed to the Agency in 1877. The department has since rapidly expanded. Statistics of the number of civil hospitals and dispensaries and of the patients treated are given below :—

	Number of hospitals and dispensaries.	Average daily number of patients.	
		Indoor.	Outdoor.
1891	12	86	525
1896	15	113	659
1901	16	113	703
1903	17	120	725

These figures exclude the statistics for institutions maintained by the North-Western Railway, private bodies, and Native States, which numbered (1891) seven, (1896) nine, (1901) ten, and (1903) eleven. The total number of cases treated in all institutions has been (1881) 8,590, (1891) 112,809, (1901) 207,534, and (1903) 204,611. In 1887 the system of medical relief was remodelled, all medical institutions being placed under the Agency Surgeon and Administrative Medical Officer, who was made the central controlling authority. A Civil Surgeon is stationed at Quetta, and the military European medical officers at garrison stations have been appointed Civil Surgeons of those places. Seven Assistant Surgeons and twenty-eight Hospital Assistants are employed. The largest hospital is at Quetta. Two hospitals are supported by the Lady Dufferin Fund.

The principal source of income is a grant from Provincial revenues. The cost of medicines, diet, &c., has largely increased in recent years. The following figures indicate the income and expenditure of civil medical institutions maintained by Government :—

	Income.				Expenditure.		
	Total.	Government payments.	Local and municipal payments.	Fees, endowments, and other sources.	Total.	Establishment.	Medicines, diet, buildings, &c.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1891 . .	27,700	22,500	3,600	1,600	26,000	18,800	7,200
1896 . .	29,600	25,400	3,800	400	30,800	21,200	9,600
1901 . .	43,100	35,700	6,700	700	42,900	22,900	20,000
1903 . .	59,300	52,800	5,100	1,400	62,000	24,400	37,600

The commonest endemic diseases are malarial fevers and cachexia, bowel complaints, scurvy, chronic ulcers including 'frontier sores,' chronic inflammation of the eyes, dysentery, and rheumatism. They are caused chiefly by insufficient clothing, insanitary dwellings, poor diet, the absence of antiscorbutics, and the dust and dryness of the atmosphere. Of epidemics, small-pox, measles, cholera, and typhus fever are the most prevalent.

Ten outbreaks of cholera have occurred between 1887 and 1903. Contrary to general rule, it is quite possible to secure effective land quarantine in Baluchistān. There have been four known outbreaks of typhus fever since 1891, but the occurrence of this disease appears to have remained unidentified in several instances. An inspection camp established on the railway in 1896 has hitherto prevented the spread of plague to Upper Baluchistān, but an outbreak occurred in 1902 at Sonmiāni in Las Bela.

The Province possesses no lunatic asylum. Lunatics are sent to the Hyderābād Asylum in Sind. The following table shows the number of criminal and other lunatics from Baluchistān and the cost of each inmate:—

	1891.	1896.	1901.	1903.
Average daily number of—				
(*a*) Criminal lunatics	None	None	0·6	1·5
(*b*) Other lunatics	7·3	13·9	6·1	12·3
Average cost of each inmate per annum	Rs. a. p. 70-7-9	Rs. a. p. 103-9-10	Rs. a. p. 109-6-5	Rs. a. p. 104-8-6

Lunatics from Baluchistān are reported to be generally well-behaved, but to be specially subject to outbursts of passion and acts of violence.

Since the introduction of vaccination the outbreaks of small-pox have been limited in both extent and virulence. Vaccination is available throughout directly Administered areas, but is compulsory only in Quetta. Inoculation is freely practised by Mullās, Saiyids and others, a small fee, generally four annas, being charged for the operation. The people are still ignorant and apathetic, and rarely resort to vaccination till an outbreak of small-pox occurs. Re-vaccination is seldom permitted. In 1896, 12,500 operations were performed, of which 11,000 were successful; in 1903 the number was 13,000, of which 10,500 were successful. The cost per successful case was two annas and two pies in 1896, and four annas and eight pies in 1903.

The sale of quinine in pice packets is progressing: 6,627 packets were sold in 1895-6; 8,694 in 1901-2; and 8,050 in 1902-3. Village sanitation is conspicuous by its absence. In the highlands manure is freely used in cultivation, and sweepings and dirt are thus removed to some extent from the neighbourhood of habitations. The nomads move

their encampments when their surroundings become filthy beyond endurance.

Surveys.

The coast of the Province was originally surveyed by officers of the late Indian Navy between 1823 and 1829. These surveys were afterwards revised and corrected by Lieutenant A. W. Stiffe in 1874, and excellent charts have been published by the Admiralty. The charts are supplemented by a very complete and accurate account of the coast known as the *Persian Gulf Pilot*[1].

A systematic survey of the interior was commenced by the Survey department of the Government of India in 1879, and during the succeeding twenty years a triangulation connected with the Indus series of the Great Trigonometrical Survey was extended through the country. In spite of great difficulties, topographical surveys on the half-inch scale have been carried out up to the 66th east parallel, and maps have been published on that scale. Westward, the results of a reconnaissance survey have been embodied in published maps on the quarter-inch scale. Several special large-scale surveys have also been undertaken, including one for a railway in the Zhob Valley and another of the coal-bearing Sor range.

In connexion with the settlement operations, a cadastral survey of all irrigated villages in the Quetta, Pishīn, Shāhrig, Sanjāwi, Sibi, Hindubāgh, Kila Saifulla, and Bori *tahsīls* has been undertaken on the scale of 16 inches to 1 mile. These surveys are based on traverses carried out by the Survey of India department, and are being extended to the Duki and Bārkhān *tahsīls*. The agency employed is almost entirely foreign, and the local Afghān has so far shown little aptitude for acquiring the principles of surveying.

[*Baluchistān Blue Books*, Nos. 1 and 2 (1877).—*Baluchistān Agency Annual Administration Reports* (Calcutta).—*Census of India*, 1901, vols. v, v*a*, v*b*.—G. B. Tate: *Kalāt* (Calcutta, 1896).—'Geographical Sketch of the Baluchistān Desert and part of Eastern Persia,' *Memoirs of the Geological Survey of India*, vol. xxxi, pt. 2 (Calcutta, 1904).—M. L. Dames: *An Historical and Ethnological Sketch of the Baloch Race* (1904).—Sir T. H. Holdich: *The Indian Borderland* (1901).—A. W. Hughes: *The Country of Baluchistān* (1877).—J. H. Lace: 'A Sketch of the Vegetation of British Baluchistān,' *Journal Linnean Society*, vol. xxviii (1891).—C. Masson: *Narrative of a Journey to Kalāt* (1843); *Journeys in Balochistān, Afghānistān, and the Punjab* (1842).—A. H. M'Mahon and Sir T. H. Holdich: Papers on the Northern and Western Borderlands of Baluchistān in *Geographical Journal*, vol. ix.—H. Pottinger: *Travels in Beloochistan and Sinde* (1816).—T. H. Thornton: *Life of Colonel Sir Robert Sandeman* (1895).]

[1] London, 1898. Sold by J. D. Potter, 31, Poultry, and 11, King Street, Tower Hill.

TABLE I

Administrative Divisions.	Area in square miles.	Number of villages.	Total Population, 1901. Persons.	Males.	Females.	Persons per square mile in rural areas.
I. BRITISH AND ADMINISTERED TERRITORY.						
(1) Zhob . . .	9,626	245	69,718	39,637	30,081	7
(2) Loralai . . .	7,999	400	67,864	37,823	30,041	8
(3) Quetta-Pishīn . .	5,127	329	114,087	68,945	45,142	17
(4) Chāgai, including Western Sinjrāni* .	18,892	32	21,689	11,418	10,271	1
(5) Bolān . . .	896	8	1,936	1,483	453	2
(6) Sibi	4,152	304	73,893	41,619	32,274	17
Total	46,692	1,318	349,187	200,925	148,262	7
II. NATIVE STATES.						
A. Kalāt State.						
(1) Sarawān . . .	4,339	298	65,549	36 366	29,183	14
(2) Kachhi . . .	5,310	606	82,909	44,836	38,073	16
(3) Jhalawān . .	21,128	299	224,073	115,077	108,996	11
(4) Khārān* . . .	14,210	20	19,610	8,825	10,785	1
(5) Makrān*. . .	26,606	125	78,195	35,188	43,007	3
Total	71,593	1,348	470,336	240,292	230,044	7
B. Las Bela State .	6,441	139	56,109	29,718	26,391	9
Total	78,034	1,487	526,445	270,010	256,435	7
III. TRIBAL AREAS.						
(1) Marri Country . .	3,268	5	20,391	11,491	8,900	6
(2) Bugti Country . .	3,861	3	18,528	10,266	8,262	5
Total	7,129	8	38,919	21,757	17,162	5
GRAND TOTAL	131,855	2,813	914,551	492,692	421,859	5

* The figures for Makrān, Khārān, and Western Sinjrāni are estimates made in 1903.

NOTE.—There were six towns in Baluchistān in 1901; one each in Sibi, Loralai, and Zhob Districts, and three in Quetta-Pishīn. The urban population numbered 40,033, l eing 31,757 males and 8,276 females.

TABLE II

Levies *

	Total number and cost of levies.		Number of horsemen.	Number of footmen.	Native officers (*Daffadārs* and upwards).	Number of headmen and others receiving allowances.	Number of men receiving political and charitable allowances.	Miscellaneous, clerks, &c.
	Number.	Cost.						
		Rs.						
1891–2 . . .	1,994	4,02,725	1,002	502	293	55	74	68
1895–6 . . .	1,989	5,10,363	985	480	303	67	65	89
1900–1 . . .	2,337	6,06,088	1,144	537	366	90	90	110
1902–3 . . .	2,351	6,02,747	1,164	532	354	95	94	112

* Including postal and telegraph levies, but excluding Zhob Levy Corps.

Police

	Total number.	District Police.							Municipal and cantonment police.		Railway police.		Total cost.	Watchmen paid from Local funds.	
		Supervising staff.		Subordinate staff.											
		District and Assistant Superintendents.	Inspectors.	Deputy-Inspectors.	Sergeants.	Mounted officers.	Mounted constables.	Footmen.	Supervising staff.	Subordinate staff.	Supervising staff.	Subordinate staff.		Number.	Cost.
													Rs.		Rs.
1891–2	1,005	...	2	18	131	13	114	445	...	118	2	162	1,84,189	41	5,123
1895–6	1,082	1	2	20	152	12	122	508	...	127	2	136	2,37,972	101	12,672
1900–1	1,159	3	3	21	161	12	125	557	1	138	2	136	2,80,179	98	11,998
1902–3	1,186	4	3	20	162	12	124	562	1	167	1	130	2,71,683	94	·11,221

Balūn.—Cantonment of Dalhousie station in the Pathānkot *tahsīl* of Gurdāspur District, Punjab, lying 2 miles below Dalhousie, which it serves as a convalescent dépôt. Population (1901), 508.

Bālurghāt Subdivision.—Southern subdivision of Dinājpur District, Eastern Bengal and Assam, lying between 24° 55′ and 25° 32′ N. and 88° 25′ and 89° 0′ E., with an area of 1,177 square miles. The northern part of the subdivision is a flat alluvial plain; but to the south this merges in the Bārind, where the ground is elevated and covered with brushwood, which is now yielding to the axe and plough. The subdivision was constituted in November, 1904, out of part of the old head-quarters subdivision. The population of this tract in 1901 was 386,630, compared with 338,545 in 1891, the density being 328 persons per square mile. In the sparsely populated Bārind tract a rapid increase is now taking place. It contains 2,631 villages, one of which, Bālurghāt, is the head-quarters, but no towns. There are interesting historical remains at Devikot.

Bālurghāt Village.—Head-quarters of the subdivision of the same name in Dinājpur District, Eastern Bengal and Assam, situated in 25° 13′ N. and 88° 47′ E., on the east bank of the Atrai river. Population (1901), 2,331. It contains the usual public offices; the sub-jail has accommodation for twenty prisoners.

Bāmanbore.—Petty State in Kāthiāwār, Bombay.

Bāmanghāti.—Northern subdivision of Mayūrbhanj, one of the Orissa Tributary States in Bengal, with head-quarters at Bahalda. It was at one time under British management, supervised by the Deputy-Commissioner of Singhbhūm, but was restored to the direct control of the Rājā of Mayūrbhanj in 1878.

Bāmanwās (or Bāmniawās).—Head-quarters of the *tahsīl* of the same name in the Gangāpur *nizāmat* of the State of Jaipur, Rājputāna, situated in 26° 33′ N. and 76° 34′ E., about 55 miles south-east of Jaipur city. Population (1901), 5,294. The town contains a lower primary vernacular school attended by 35 boys, and two elementary indigenous schools. The *tahsīl* is the only one in the State in which rice is at all extensively grown.

Bamjur.—Frontier post in Lakhimpur District, Assam. *See* Bomjur.

Bāmniawās.—*Tahsīl* and head-quarters thereof in Jaipur State, Rājputāna. *See* Bāmanwās.

Bāmra.—Feudatory State in Bengal, lying between 21° 9′ and 22° 12′ N. and 84° 8′ and 85° 13′ E., and occupying a tract of hilly country between the valley of the Mahānadī and the Chotā Nāgpur plateau. Up to 1905 the State was under the political control of the Central Provinces. The eastern portion of the State consists of a mass of hill and jungle, but to the west and north there is open and fertile

country. The total area is 1,988 square miles, and the capital is DEOGARH. The only important river is the Brahmanī, which flows through a small strip on the eastern border. Wild elephants are found in the State. The ruling family are Gangābansi Rājputs. They have a genealogy dating back to A.D. 1602; and according to their traditions the first Rājā of Bāmra belonged to the royal family of Patnā State, and was stolen from his home and made king of Bāmra by the Bhuiyās and Khonds. The late Rājā, Sir Sūdhal Deo, K.C.I.E., was a gentleman of advanced education and enlightened views who did much to improve his State. He died in 1903 and was succeeded by his son, Rājā Tribhuvan Deo. The relations of the State with Government are controlled by a Political Agent subordinate to the Commissioner of Orissa. The population in 1901 numbered 123,378 persons, showing an increase since 1891 of 18 per cent. About 77 per cent. of the population speak Oriyā and 18 per cent. the Oraon and Mundārī dialects. As is shown by the language, the population is mainly Oriyā, Chāsās, Kisāns, Gahrās, and Gāndas being the most important castes numerically. There are also a number of Gonds and Bhuiyās.

The soil is light and sandy, the best quality being found under the hills. The area cultivated in 1905 was 227 square miles, or 11 per cent. of the total, having largely increased during the last decade. The principal crops are rice, *til*, and castor, about 140 square miles being always under rice. There are 974 irrigation tanks. The State forests cover 1,734 square miles, and contain valuable *sāl* timber (*Shorea robusta*), which has only been exploited within recent years. Saw-mills have been established at Sirid, 20 miles from Deogarh, at which about 50,000 sleepers are at present annually produced for export. Lac, silk cocoons, catechu, and myrabolams are other forest products. The State also contains considerable deposits of iron ore and mica. At Balam, 10 miles from Deogarh, the late chief established a factory with an irrigation pump, and also flour-mills, sugar-cane-mills, and an oil-mill worked by two portable engines. There are 23 miles of metalled and 183 miles of unmetalled roads, maintained from the State funds under the direct supervision of the chief. The Bengal-Nāgpur Railway passes through the north-eastern corner of the State with two stations—Bāmra Road and Garpos—within its borders.

The revenue from all sources amounted in 1904 to Rs. 1,54,000, the principal items being land revenue, Rs. 68,000; forests, Rs. 16,000; and excise, Rs. 10,000. The taxation of land is about 10 annas per cultivated acre. A regular assessment has been made on the basis of soil classification. The expenditure in 1904 was Rs. 1,48,000, the principal items being the private expenses of the chief's family, Rs. 50,000; general administration, Rs. 8,200; police, Rs. 12,000; and education and medical, Rs. 5,000 each. Rs. 1,500 is paid as tribute to

the British Government. In 1904 the State had 28 schools with 1,005 pupils, including a high school at Deogarh. At the Census of 1901, 5,011 persons were shown as literate, all in Oriyā, and 4 per cent. of the population (7·6 males and 0·3 females) were able to read and write. The State maintains two dispensaries, at Deogarh and Kuchindā, in which nearly 19,000 cases were treated during 1904.

Banās ('Hope of the forest').—A river of Rājputāna. It rises in the Arāvalli Hills (25° 3′ N. and 73° 28′ E.) in Udaipur, about three miles from the fort of Kūmbhalgarh, and after a tortuous course, generally north-east, of about 300 miles through the territories of Udaipur, Jaipur, Būndi, Tonk, and Karauli, and the British District of Ajmer, falls into the CHAMBAL (25° 55′ N. and 76° 44′ E.) at the holy *sangam*, Rāmeswar. From its source the river flows south, till it meets the Gogūnda plateau, when it turns eastward and, cutting through the outlying ridges of the Arāvallis, bursts into the open country. Here on the right bank is the famous Vaishnava shrine of Nāthdwāra; and a little farther on the Banās forms for a mile or so the boundary between Udaipur and a small outlying portion of Gwalior territory, while near Hamīrgarh the Rājputāna-Mālwā Railway crosses it by a bridge. Continuing east by north-east, and still in Udaipur territory, it receives two tributaries, the Berach and Kothāri, and passing within three miles of Jahāzpur, it reaches the Ajmer border. For nine miles it forms the boundary between Udaipur and Ajmer; and after a further course of five miles in the latter District it is joined by the Khāri river, close to the village of Negria, and not far from the cantonment of Deoli. At this point it is crossed by the Nasīrābād-Deoli road and immediately after enters Jaipur territory.

Near the picturesque village of Bīsalpur, where it is joined by the Dain river, it turns first east and then south-east, and instead of flanking the Toda range of hills, forces for itself a narrow passage through them at right angles to the direction of the range, entering it at Bīsalpur, and leaving it at Rājmahal. At both places the torrent in flood has scoured deep holes; and in these and other pools mahseer, *lānchi*, and other kinds of fish are to be found. The scenery is exceedingly wild and beautiful. The hills on either side are crowned with the remains of old forts with their zigzag approaches meandering through the forest which covers them, while the old palace of the ancient rulers of Rājmahal, in fair preservation notwithstanding the lapse of time, and the little village nestling at the foot of the hills on the verge of the stream, give life and character to the whole scene. Lower down the Banās passes through an outlying portion of Būndi territory, and later is for thirty miles or so a river of Tonk. On being joined by the Māshi river it turns east, and passes about three miles north of Tonk city, where it is crossed by the metalled road which runs to Jaipur. Here again

some very fair fishing is to be had. Soon after re-entering Jaipur it is crossed by a fine bridge, constructed in connexion with the railway from Jaipur to Sawai Mādhopur now in progress; and after receiving the Dhil and Morel rivers it turns south, forming for a short distance the boundary with Karauli, and as it approaches the Chambal passes through the wild hills of Ranthambhor and Khāndhar, two ancient forts of the Jaipur State.

The river is generally impassable in flood, and there are ferries at Negria, Rājmahal, and Tonk, which are required for four or five months in the year. The bed, which is generally dry in the hot months, is in the upper parts hard and rocky, but lower down there are dangerous quicksands, and the river should not be crossed by a stranger without a guide. The banks are well defined, and on an average 30 feet high, while the breadth of the channel varies from less than 100 to 1,000 yards.

Banās.—A river of Western India, which rises in the Arāvalli Hills to the north-east of Mount Abu, flows south-westwards through the Pālanpur Agency past the flourishing town and cantonment of Deesa, and falls into the Rann of Cutch by two mouths, near Gokhātar in Vārāhi and Agichāna in Sāntalpur, about 170 miles from its source. It is fordable almost everywhere, and its lower course is dry in the hot season, but at times it brings down from Abu great volumes of flood-water that cover the Little Rann to a depth of 8 feet.

Banavāsi.—A 'twelve thousand' province, corresponding generally with the Shimoga District of Mysore, formed under the Chālukyas (sixth century) and subsequent rulers, with its capital at Balligāve (Belgāmi in the Shikārpur *tāluk*). BANAVĀSI, from which the province took its name, was an ancient city on the north-west border of Mysore State. It was the capital of the Kadambas from the second to the fifth century, and even later remained identified with them. It is mentioned by Ptolemy, and before that, in the third century B.C., was one of the places to which Asoka is said to have sent a Buddhist missionary.

Banavāsi (*Vanavāsi*).—Village in the Sirsi *tāluka* of North Kanara District, Bombay, situated in 14° 32′ N. and 75° 1′ E., on the banks of the Varadā river, 14 miles from Sirsi town. Population (1901), 2,260. It was formerly a place of considerable importance, but is now merely a village. The temple to Siva, though a mean building, had once very large endowments, and is still much frequented; it contains a very fine figure of Nandi, and a table made from black granite, and in or near it are twelve inscriptions, dating from the second to the seventeenth century A.D. The car-drawing ceremony takes place here every year about March or April, and is attended by about 4,000 people, chiefly Haiga or Havik Brāhmans. The name of the town is mentioned by

Ptolemy; it is also referred to in Buddhist records of the third century B.C. Banavāsi was the capital of the Kadamba kings until the early part of the thirteenth century. In 1220 and in 1278 the Banavāsi 'twelve thousand' was held by the Deogiri Yādavas; from the fourteenth century until 1560 it was under the Vijayanagar kings, and then passed to the Sonda chief.

Bancoora.—District, subdivision, and town in Bengal. *See* BĀNKURĀ.

Bāndā District.—District in the Allahābād Division of the United Provinces, lying south-west of the Jumna, between 24° 53′ and 25° 55′ N. and 79° 59′ and 81° 34′ E., with an area of 3,060 square miles. On the north and north-east the Jumna divides it from Fatehpur and Allahābād; Allahābād and the State of Rewah lie on its eastern border; the States of Pannā, Sohāwal, Kothī, Pātharkachhār, Chaube *jāgīrs*, Charkhārī, and Ajaigarh form the southern boundary; and the States of Charkhārī and Gaurihār and Hamīrpur District lie on the west. Bāndā consists of a varied country, sloping downwards from the Vindhyan range on the south and west to the valley of the Jumna on the north and north-east. The south-eastern or highest portion is composed of the sandstone hills which form the northward escarpment of the great table-land of Central India. These hills are well wooded and are arranged in a series of terraces with bold and abrupt scarps facing the north, their highest elevations being 1,300 feet above the sea. Their sides are scored by the beds of mountain torrents, which during the rainy months form affluents of the Jumna, but in the dry season gradually diminish, until by the month of May their channels are mostly empty. The Ken, Bāghain, and Paisunī, however, the most important among them, are never quite dry. North of this hilly region lies a tract of undulating plains, at first thickly studded with rocky isolated hills, sometimes crowned by ruined fortresses, which rapidly decrease in number and size. The plain itself, the most fertile portion of the District, is widest at its western extremity, and narrows like a wedge as it runs eastward. The Jumna valley rises by a series of terraces, broken by ravines, to the level of the table-land above.

Physical aspects.

In the greater part of the District the older rocks are concealed by the alluvium of the Gangetic plain. The northern or Bindhāchal range of the Vindhyan plateau consists of Kaimur sandstone, while the southern or Pannā range is composed of the overlying upper Rewah sandstone, and the space between is made up of the Pannā and Jhirī shales. Below the sandstone lies the Archaean gneiss, which is visible only in a few places.

The hills in the south-east are covered with 'reserved' forest, while the rest of the District is fairly well wooded. The flora of Bāndā has

been fully described[1]. The characteristic feature is that it forms the northern limit of many Central and Southern Indian species, which here meet the plants of the Doāb. *Ailantus excelsa* and teak are not found farther north in a wild state. The *mahuā* tree (*Bassia latifolia*) is of great economic value, and is largely planted.

Tigers are occasionally found in the 'reserved' forest, and leopards, hyenas, wolves, and bears are more common in the same tract. *Sāmbar* haunt the forests, and antelope are common in the plains, while wild hog abound in many parts. Sand-grouse, partridges, quail, duck, teal, and geese are the commonest game-birds. Fish, including small mahseer and Indian trout, abound in the Ken, Bāghain, and Paisunī, and many kinds are common in the Jumna. The crocodile and the porpoise are also found in several rivers.

The cold season is less intense than in the neighbouring Districts of the Doāb, frost being rare. The hot season commences in the middle of March, and is distinguished by the absence of dust-storms and comparative clearness of the atmosphere. The heat soon becomes intense and lasts till late in October. The climate is unhealthy for both Europeans and natives, and deaths from exposure to the sun are unusually frequent.

The annual rainfall averages more than 40 inches, but the west of the District receives less than the south near the hills and the east near the Jumna. Large variations from the average are frequent. In 1894 the rainfall was about 82 inches, and in 1896 only 18 inches.

History.

According to tradition, Rāma and Sītā during their exile stayed a while at CHITRAKŪT. The history of the District is that of BUNDELKHAND. South of Bāndā stands the magnificent hill fortress of KĀLINJAR, one of the chief strongholds of the Chandels, who ruled from about 850 till the rise of Musalmān influence. About 1182 Prithwī Rāj of Delhi defeated Parmāl Deva, the last great Chandel ruler, and in 1203 the Chandels were finally overthrown by Kutb-ud-dīn, and became petty Rājās. Mewātīs and Bhars then overran the country, and its history for several hundred years is scanty. Though the Muhammadans had overthrown the ruling dynasty, they never acquired a firm hold, and Sher Shāh lost his life at the siege of Kālinjar in 1545. Under Mughal rule the District formed part of the *Sūbah* of Allahābād; but early in the eighteenth century the Bundelās, whose power hitherto had not extended permanently as far east as Bāndā, took Kālinjar, and Chhatar Sāl, their leader, was recognized by Shāh Alam Bahādur as ruler of Bundelkhand. Contests with the imperial troops under Muhammad Khān, the Bangash Nawāb of Farrukhābād, who was governor of Allahābād, led to the calling in of the Marāthās, and by the middle of the eighteenth

[1] M. P. Edgeworth in *Journal, Asiatic Society of Bengal*, vol. xxi.

century the Bundelā dominions gradually split up into small states. Internal dissensions favoured the extension of Marāthā power, and in 1776 British troops marched south from Kālpī against the intruders. During the rest of the century misrule increased; and the Marāthās overran Bāndā under Alī Bahādur, an illegitimate son of the Peshwā Bājī Rao, in alliance with Himmat Bahādur, a religious mendicant who had turned soldier. Alī Bahādur fell at a siege of Kālinjar in 1802. The District was ceded to the British by the Treaty of Poona in 1803; but Shamsher Bahādur, son of Alī Bahādur, and several independent chiefs had to be reduced. Himmat Bahādur, on the other hand, yielded and received a large *jāgīr* along the Jumna, which lapsed to the British shortly after. The District remained quiet under British rule, but its fiscal history, which will be related later, was unfortunate.

On the outbreak of the Mutiny in May, 1857, the ignorant inhabitants were easily incited to revolt by the Cawnpore and Allahābād mutineers. The 1st Native Infantry seized on the magazine and public buildings at Bāndā, and were joined by the troops of the Nawāb. Until June 14 every effort was made by the British residents to retain the town, but on that date it was abandoned. The Nawāb of Bāndā, a descendant of Alī Bahādur, whose name he bore, then put himself at the head of the rebellious movement. The Joint-Magistrate of Karwī, Mr. Cockerell, was murdered at the gate of the Nawāb's palace on June 15. The rural population, with a few notable exceptions, rose *en masse*, and a period of absolute anarchy followed. The Nawāb attempted to organize a feeble government; but his claims were disputed by other pretenders, and he was quite unable to hold in check the mob of plunderers whom the Mutiny had let loose upon the District. The fort of Kālinjar, however, was held throughout by the British forces, aided by the Rājā of Pannā. The town of Bāndā was recovered by General Whitlock on April 20, 1858.

The most striking remains in Bāndā District are contained in the great fort of Kālinjar; but Chandel temples have survived in many places, and the fort of Marphā also deserves mention. The town of Kālinjar contains a few Muhammadan buildings, and the Marāthās have left some memorials at Bāndā and Karwī. Stone implements have been found at several places in or near the hills, and are collected in many village shrines. A few caves contain ancient rude drawings.

Population.

There are 5 towns and 1,188 villages. The population, which had been increasing steadily, received a sudden check in the disastrous series of years from 1892 to 1897. The numbers at the last four enumerations were as follows: (1872) 697,684, (1881) 698,608, (1891) 705,832, and (1901) 631,058. Bāndā is divided into eight *tahsīls*—Bāndā, Pailānī, Baberū, Kamāsin, Mau, Karwī, Badausā, and Girwān—the head-quarters of each

being at a town of the same name. The principal towns are the municipality of BĀNDĀ, the District head-quarters, and KARWĪ, the head-quarters of a *tahsīl* and subdivision. The following table gives the chief statistics of population in 1901 :—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Bāndā	427	1	113	98,574	231	− 12·7	4,548
Pailānī	362	...	121	80,524	222	− 9·1	2,319
Baberū	363	...	121	77,395	213	− 19·6	1,674
Kamāsin	358	...	169	78,773	220	− 5·4	1,953
Mau	316	1	164	64,921	205	− 11·9	2,411
Karwī	567	2	189	78,410	138	− 10·6	2,912
Badausā	333	...	132	74,755	224	− 4·1	1,881
Girwān	334	1	179	77,706	233	− 9·1	1,950
District total	3,060	5	1,188	631,058	209	− 10·6	19,648

About 94 per cent. of the population are Hindus and less than 6 per cent. Musalmāns. As in all the Bundelkhand Districts, the density of population is less than half the Provincial average. Eastern Hindī is the prevailing language; but it is much mixed with the Bundelī dialect of Western Hindī. Various dialects are recognized locally, such as Kundrī, Tirhārī, Gahorā, and Jurār.

Chamārs (leather-workers and cultivators), 98,000, are the most numerous Hindu caste. The following are also important: Brāhmans, 92,000; Ahīrs, 59,000; Rājputs, 49,000; Korīs (weavers), 28,000; and Kurmīs, 24,000. The Kols, a jungle tribe more common in Central India, number 5,700; and the Domārs, a depressed labouring caste, 5,000. Among Musalmāns the Shaikhs number 17,000 and the Pathāns 8,000. Agriculture supports 70 per cent. of the population, and general labour 6 per cent. Brāhmans, Rājputs, and Kurmīs are the chief holders of land; and the same castes, together with Kāchhīs and Ahīrs, are the principal cultivators.

In 1901 there were 147 native Christians, of whom 82 were Anglicans, 30 Presbyterians, and 11 Methodists. The Society for the Propagation of the Gospel Mission commenced work about the time of the Mutiny, and a missionary has been stationed at Bāndā town since 1873. The American Methodist Mission has two branches in the District.

Agriculture.

Like the whole of Bundelkhand, Bāndā is specially liable to fluctuations in agricultural prosperity, and cultivation advances or declines in alternate cycles. The prevailing soils differ considerably in composition and fertility. *Mār* is a rich black soil, which can be easily tilled in favourable seasons and is often very fertile. It is retentive of moisture and can thus, with ordinary

rain, produce wheat and other spring crops without irrigation. An excess or too great deficiency of rain makes *mār* unworkable. *Kābar* is stiffer and more difficult to work than *mār*; and although it is also capable of producing spring crops, it is more easily rendered unworkable by variations in the rainfall. *Mār* and *kābar* are found in most parts of the District, but especially in the northern plain. A red or yellow loam called *parwā*, resembling the ordinary loam soil of the Doāb, occurs in many parts. Where the surface is uneven, and especially near the ravines and watercourses which drain into the larger rivers, the natural soil is deprived of its more fertile constituents, and produces only a scanty autumn harvest. The level tracts in the beds of the larger rivers, called *tarī* or *kachhār*, often consist of very fertile alluvium. Near the hills, and on the Vindhyan terraces, a thin layer of red soil is found, which soon becomes exhausted by cultivation. One of the greatest difficulties which the cultivator has to contend with is the growth of a coarse grass called *kāns* (*Saccharum spontaneum*), which spreads rapidly. The spring crops are also liable to be attacked by rust in damp and cloudy cold weather.

At cession the prevailing tenure was *ryotwāri*, which under the policy adopted became *pattīdāri* and *bhaiyāchārā*, with a variety of the latter known as *bhej barār*. The transfers of property during the early period of British rule led to an increase in *zamīndāri* villages, which are gradually disintegrating into *pattīdāri*, though they still include nearly half the estates in the District. A peculiar tenure, named *pauth*, exists, chiefly in alluvial land, in accordance with which a plot of land passes in annual succession to a different co-sharer or cultivator. The privilege of cultivating land on payment of revenue rates and not rent rates has also survived. The main agricultural statistics for 1903-4 are shown below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Bāndā	427	207	1	140
Pailānī	362	188	...	89
Baberū	363	189	1	116
Kamāsin	358	205	...	83
Mau	316	132	1	105
Karwī	567	126	3	187
Badausā	333	165	1	92
Girwān	334	168	2	93
Total	3,060	1,380	9	905

NOTE.—Statistics for the Bāndā and Pailānī *tahsīls* are for 1902-3.

The chief food crops, with their areas in 1903-4, were gram (519 square miles) and *jowār* (299), covering 38 and 22 per cent., respectively, of the net cultivated area; rice, wheat, *bājra*, and barley are

also of importance. Oilseeds (137 square miles) and cotton (75 square miles) are the principal non-food crops.

As in the other Bundelkhand Districts, there has been no improvement in agricultural practice in Bāndā. The area under cultivation varies considerably. Attempts have been made to eradicate *kāns* by a steam-plough and by flooding; but the former method was too costly, and the latter is difficult owing to the scarcity of water. Nearly 6 lakhs was advanced under the Land Improvement and Agriculturists' Loans Acts between 1891 and 1900, of which 3·4 lakhs was lent in the bad years, 1895–7. In the four more favourable years, 1900–4, the total advances amounted to Rs. 86,000.

There is one well-defined breed of cattle called Kenwariyā, chiefly found along the river Ken. The cattle are small, but hardy and active, and thrive on poor food. Attempts are now being made to improve the strain. A little horse-breeding is conducted in the Pailānī *tahsīl*, and the experiment of maintaining a stallion at Bāndā town has met with considerable success. The goats are of distinctly high standard, and sheep-breeding is an industry of some importance, both for wool and for supplying meat to Cawnpore and Allahābād.

At the present time there is very little irrigation in Bāndā, owing to the difficulty of obtaining a supply of water, and the unsuitability of *mār* soil for well-irrigation. The spring-level is 60 to 100 feet below the surface, and temporary wells can be made only in few places. The rivers flow in deep channels through broken country. Thus in 1903–4 only 9 square miles were irrigated. Wells supplied two-thirds of this, a few fields in which garden crops are grown being found in many villages. Many scattered fields, however, are kept sufficiently moist by means of small embankments, and the extension of this system is being tried. A canal, which was begun in 1903 and opened in 1906, draws its supply from the Ken by means of a dam and reservoir. It is designed to serve the tract between the Ken and Bāghain rivers, and will protect an area containing 65 per cent. of the total population, in which 33 lakhs was spent on famine relief in 1896–7. The estimated cost of the canal is 37 lakhs.

The forests in the south-east of the District cover an area of 114 square miles, of which 84 are 'reserved.' They are of small commercial importance, but serve to prevent further erosion, and supply the wants of the neighbouring villages for grazing and minor produce. Teak, bamboos, *Boswellia thurifera*, *Buchanania latifolia*, *Ficus latifolia*, *Lagerstroemia parviflora*, *Odina Wodier*, *Sterculia urens*, and *Terminalia tomentosa* are the principal trees.

The sandstone in the south of the District is, in places, well adapted for building, for millstones, and for other purposes. Greenstone, pipe-clay, and limestone are also worked. Iron is found and was formerly

worked at several places; but the reservation of the forests has increased the cost of fuel. There was formerly a diamond mine in the Bindhāchal range, but it has been closed.

Trade and communications.

The industries of the District are few and unimportant. Coarse cotton cloth, cotton prints, metal cooking-vessels, and rough cotton carpets are made in several places for the local market. Agate pebbles, imported from the Narbadā, are cut and polished, and used for a variety of ornaments. There is a small production of silk-embroidered plush or velvet articles at Karwī. A single cotton gin at the same place employed 180 hands in 1903.

The trade of Bāndā is chiefly in agricultural produce and in the few articles required by the population. In favourable years gram, millet, and wheat are largely exported. Cotton is a considerable item of export, and the produce of this District has a good reputation. Rice, sugar, tobacco, salt, and metals are the chief imports. Traffic from the greater part of the District was formerly directed towards the Jumna, and was then either carried by river, or taken to Fatehpur on the East Indian Railway; but the opening of a line through the District has partly diverted this trade, though BINDKĪ and Cawnpore still attract a large share of the commerce of the District. BĀNDĀ, KARWĪ, and RĀJĀPUR are the most flourishing trade centres.

A branch of the East Indian Railway from Allahābād to Jubbulpore has a length of 47 miles in the south-east of the District. At Mānikpur this is met by the Midland section of the Great Indian Peninsula line from Jhānsi, which passes through Bāndā and Karwī. Communications have been greatly improved in recent years; and the District contains 131 miles of metalled roads, of which 56 are maintained at the cost of Provincial revenues, and 587 miles of unmetalled roads. Avenues of trees are kept up on 120 miles. The chief routes are from Bāndā town to Chillā on the Jumna, from Bāndā towards Saugor, and from Bāndā through Karwī to Mānikpur.

Famine.

Distress in Bāndā District may be due to excess or deficiency of rain. The former causes a spread of *kāns* or rust, while the latter prevents cultivation. Bundelkhand suffered from famine in 1813-4 and again in 1819, when over-assessment aggravated the distress. A series of bad years necessitated large remissions between 1833 and 1837. In 1837-8, however, the people escaped more lightly than in the neighbouring Districts to the north and east. The next famine of 1869 was due to excessive rain in 1867 and a deficiency in 1868. In May, 11,000 persons were employed on relief works, and the people lost many of their cattle. The District was depressed till 1873, when there was a recovery; and

the drought of 1877 was beneficial, inasmuch as it checked the growth of *kāns*. Another period of depression commenced in 1884, when excessive rain damaged the autumn harvest for several years in succession. In 1888 the rains ceased early and *kāns* again spread. Remissions of revenue were given; but rust and heavy rain in 1894, and a short fall in 1895, caused actual famine. The misery of the people was completed by the failure of the rains in 1896, when Bāndā suffered more than any other District in the Provinces.

Administration.

The three eastern *tahsīls*—Mau, Kamāsin, and Karwī—form a subdivision, usually in charge of a member of the Indian Civil Service, who is stationed at Karwī. The Collector is assisted by a member of the Indian Civil Service and by three Deputy-Collectors recruited in India, and a *tahsīldār* is stationed at the head-quarters of each *tahsīl*. The Ken Canal, completed in 1906, is now in charge of an Executive Engineer.

The District Judge and Sub-Judge of Bāndā exercise civil jurisdiction throughout Bāndā and Hamīrpur Districts. The former is also Sessions Judge of both Districts, and in addition tries the sessions cases of Fatehpur. Bāndā is singularly free from crime. A Special Judge is at present inquiring into the cases of estates brought under the Bundelkhand Encumbered Estates Act.

At cession most of the present Districts of Bāndā and Hamīrpur and part of Jālaun were formed into a single District called Bundelkhand. This was divided into Northern and Southern Districts in 1819, Bāndā forming most of the latter. Under the Marāthās the revenue system had been *ryotwāri*, and the assessment was a rack-rent pitched at the highest figure that could be collected. The early British assessments were fixed for short periods as usual, and at first were moderate and well distributed. From 1809, however, a period of over-taxation commenced. The revenue was enhanced nominally by 12 per cent.; but a change in currency made the increase really as much as 29 per cent. The severity of the assessments was only surpassed by the methods of collection, and corrupt native officials and speculators acquired large areas. A period of agricultural prosperity led to still larger enhancements in 1815. The mistake was partly due to excessive reliance on the existing prosperity, and to ignorance of the peculiarities of Bundelkhand soils; and it was aggravated by the policy of the time. Bad seasons, commencing in 1819, were not accepted as a sufficient reason for reduction; but in 1835 remission became absolutely necessary. In 1828 the rains failed, and by 1830 the District was reduced to a condition of almost general bankruptcy. A great part of Bāndā was then taken for a time under direct management, and collections were made from the cultivators with some success. A survey was commenced in 1836, and

in 1843–4 the first regular settlement was made; average rent rates were fixed for all the well-known classes of soil, and were applied without sufficient allowance for variations, the total demand being 16·3 lakhs. Bad seasons and rigorous administration had at last led to the sanction of a reduction of revenue when the Mutiny broke out. In 1858–9 the demand was reduced by nearly 18 per cent., and the District recovered rapidly, only to suffer again from excessive rainfall in 1867 and the following years. The next revision of settlement, which commenced in 1874, thus coincided with a period of great depression. The assessment, as usual, was based primarily on assumed rates for each class of soil; but these were modified according to the actual condition of each village. The area to which these rates were applied was not, however (except in the Karwī subdivision, which was separately settled), the actual cultivated area, but an assumed standard area which was carefully worked out for each village, and which allowed for a margin of fallow. The result was an assessment of 11·3 lakhs, which was sanctioned for twenty years only. It has already been stated that a cycle of adverse seasons commenced again in 1888. In 1893 reductions of revenue, amounting to Rs. 19,000, were made, and the settlement was extended for ten years in 1894. Deterioration was already setting in, and large reductions have been made since the famine of 1896–7. The revenue demand in 1903–4 was only 9 lakhs. The District is now under the operation of the Bundelkhand Alienation of Land Act, and in 1905 a system of fluctuating assessments was commenced.

Collections on account of land revenue and total revenue have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue .	12,07	11,42	11,21	8,74
Total revenue .	12,95	14,89	14,66	12,03

Bāndā town is the only municipality in the District, but four towns are administered under Act XX of 1856. Local affairs beyond the limits of these places are managed by the District board, which in 1903–4 had an income and expenditure of 1·5 lakhs. The expenditure includes Rs. 91,000 on roads and buildings.

There are 23 police stations. The District Superintendent of police has an Assistant stationed at Karwī, and commands a force of 4 inspectors, 110 subordinate officers, and 420 constables, besides 78 municipal and town police, and 1,731 rural and road police. The District jail at Bāndā contained a daily average of 262 prisoners in 1903, and the jail at Karwī 32 in the same year.

Allowing for the absence of towns, Bāndā is not very backward as

regards literacy, compared with other Districts in the United Provinces. In 1901, 3 per cent. (5·9 males and 0·1 females) could read and write. The number of public schools rose from 142 with 3,884 pupils in 1880–1 to 149 with 4,953 pupils in 1900–1. In 1903–4 there were 172 such institutions with 6,192 pupils, including 198 girls, besides 10 private schools with 204 boys. Two schools were managed by Government, and most of the others by the District or municipal boards. Out of a total expenditure on education of Rs. 37,000, fees supplied only Rs. 2,800, the balance being met from Local funds.

There are 6 hospitals and dispensaries, with accommodation for 157 in-patients. In 1903 the number of cases treated was 38,000, including 900 in-patients, and 2,000 operations were performed. The total expenditure was Rs. 11,500, chiefly met from Local funds.

About 21,000 persons were successfully vaccinated in 1903–4, representing a proportion of 33 per 1,000 of population. Vaccination is compulsory only in the municipality of Bāndā.

[*District Gazetteer* (1874, under revision); A. Cadell, *Settlement Report* (excluding Karwī) (1881); A. B. Patterson, *Settlement Report Karwī Subdivision* (1883).]

Bāndā Tahsīl.—Western *tahsīl* of Bāndā District, United Provinces, conterminous with the *pargana* of the same name, lying between 25° 20′ and 25° 38′ N. and 79° 59′ and 80° 32′ E., with an area of 427 square miles. Population fell from 112,912 in 1891 to 98,574 in 1901. There are 113 villages and one town, BĀNDĀ (population, 22,565), the District and *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 1,48,000, and for cesses Rs. 24,000. The density of population, 231 persons per square mile, is slightly above the District average. The Ken flows through the centre of the *tahsīl*, which lies almost entirely in the level plain north of the Vindhyas. In 1902–3 only 1 square mile was irrigated, out of 207 square miles under cultivation. The Ken Canal, recently opened, serves part of this *tahsīl*.

Bāndā Town.—Head-quarters of the District and *tahsīl* of the same name, United Provinces, situated in 25° 28′ N. and 80° 20′ E., near the river Ken, on the Midland section of the Great Indian Peninsula Railway, and on a metalled road from Fatehpur to Saugor. Population (1901), 22,565. Bāndā was a mere village till the commencement of the nineteenth century, when the Nawāb, Shamsher Bahādur, settled here. Its importance was increased by its selection as head-quarters of a District, and by a flourishing trade in cotton. After the removal of the Nawāb in 1858, owing to his disloyalty in the Mutiny (*see* BĀNDĀ DISTRICT), the town began to decline, while the growth first of Rājāpur, and then of Karwī, has largely deprived Bāndā of its principal trade. It is a straggling and ill-built town, but with clean wide streets, and contains 65 mosques, 168 Hindu, 1 Sikh, and 5 Jain temples. Besides

the usual public offices, there are a dispensary and stations of the Church Missionary Society and American Methodist Missions. The chief mosque is that built by Alī Bahādur, the last Nawāb. Portions of the former palace are now used as public offices or as native residences. A mile from Bāndā stand the ruins of a fort called Bhurāgarh, which was built in 1784, and stormed by British levies in 1804. Bāndā has been a municipality since 1865. During the ten years ending 1901 the income and expenditure averaged Rs. 23,000. In 1903-4 the income was Rs. 28,000, chiefly derived from octroi (Rs. 21,000); and the expenditure was Rs. 25,000. The only local industries are the preparation of articles made of agate, and the manufacture of *lāthīs* or staves. There are 11 schools, attended by 840 pupils.

Bandā.—North-eastern *tahsīl* of Saugor District, Central Provinces, lying between 23° 53′ and 24° 37′ N. and 78° 40′ and 79° 13′ E., with an area of 704 square miles. The population decreased from 87,193 in 1891 to 72,829 in 1901. The density in the latter year was 103 persons per square mile. The *tahsīl* contains 269 inhabited villages. The head-quarters are at Bandā, a village of 1,406 inhabitants, distant 19 miles from Saugor by road. Excluding 180 square miles of Government forest, 54 per cent. of the available area is occupied for cultivation. The cultivated area in 1903-4 was 227 square miles. The demand for land revenue in the same year was Rs. 67,000, and for cesses Rs. 7,000. Bandā is the poorest *tahsīl* in the District, containing a large area of hill and rock with some open plains of limited extent in the south.

Bandalike (or Bandanike).—Ruined and deserted village in the Shikārpur *tāluk* of Shimoga District, Mysore, situated about 14° 27′ N. and 75° 18′ E., 16 miles from Shikārpur town. It was in the earliest times the capital of the Nāgarakhanda 'seventy' province, which an inscription says was ruled by the wise Chandra Gupta. Its Purānic name was Bāndhavapura. It contains many ruined temples of large dimensions and wonderful sculpture. More than thirty inscriptions, dating from the ninth to the sixteenth century, bear records of the Rāshtrakūtas, Chālukyas, Kalachuris, Hoysalas, Seunas, and Vijayanagar kings. The place was probably destroyed by the Muhammadans after the fall of Vijayanagar in 1565.

Bandamūrlanka.—Village in the Amalāpuram *tāluk* of Godāvari District, Madras, situated in 16° 27′ N. and 81° 58′ E., at the mouth of the Vainateyam, a branch of the Godāvari, 12 miles by road from Amalāpuram. It is attached to Komāragiripatnam (population, 5,757). A factory was established here early in the eighteenth century by the East India Company, but was soon abandoned.

Bandar Tāluk.—*Tāluk* of Kistna District, Madras, lying between 15° 45′ and 16° 26′ N. and 80° 48′ and 81° 33′ E. Area, 740 square

miles; population (1901), 214,316, compared with 198,384 in 1891; demand on account of land revenue and cesses (1903-4), Rs. 6,45,000. The name is derived from *bandar* = 'port,' the popular appellation of MASULIPATAM (population, 39,507), the capital of the District and head-quarters of the *tāluk*. The *tāluk* also contains 191 villages. It extends from the Kistna embouchure (including the fertile island of Divi) past Masulipatam along the coast to the north. Much of this country is uncultivated, probably because of the injury done to the soil by the inundation of the sea in 1864, and consists of sandy wastes interspersed with swamps. The climate is the most equable in the District, the great heat of the summer months being tempered by sea-breezes.

Bāndarban.—Village in the Chittagong Hill Tracts, Eastern Bengal and Assam, situated in 22° 13′ N. and 92° 14′ E., on the banks of the Sangu river. Population (1901), 2,370. It is the residence of the Bomong chief.

Bāndel (from *bandar*, 'a wharf').—Suburb of Hooghly town in Hooghly District, Bengal, situated in 22° 55′ N. and 88° 24′ E., on the right bank of the Hooghly river, about a mile north of the town and within its municipal jurisdiction. It contains a Roman Catholic convent, said to be the oldest Christian church in Bengal. Over the gateway is a stone bearing the date 1599, which, however, records the foundation not of the present but of the original building, sacked and destroyed by the Muhammadans about the year 1629. It was rebuilt in 1660 by Gomez de Soto, and called the convent of Nossa Senhora D'Rojario; the large hall on the east of the church was added about 1820. The title on which the property is held is a *farmān* assigning 777 *bīghas* of land to the community, granted by the emperor Shāh Jahān in 1633 and subsequently confirmed in 1646. The Circuit House is a fine building, which was formerly the residence of the Dacoity Commissioner. Bāndel is famous for its cream cheeses.

Bāndhogarh.—Old fort in Rewah State, and a place of considerable archaeological and historical importance. The fort stands on a hill, 2,664 feet above sea-level, in 23° 41′ N. and 81° 3′ E., and includes the neighbouring Bāmnia hill, also enclosed by a rampart and considered part of the fort. It is undoubtedly a place of antiquity, and was an important stronghold long before the Baghel dynasty acquired the country. Ptolemy mentions a Balantipyrgon as one of the towns of the Adeisathroi, and Cunningham has suggested that Adeisathroi is a Greek rendering of Haya Kshetra, the country of the Haihayas. Tradition assigns the early rule of this country to the Baland tribe, which would give some support to the identification, the names Balandipur and Balantipura being practically identical. In the thirteenth century it passed to the Baghelas as part of the

dowry of the Kalachuri bride of Karan Deo Baghela, and became the centre from which this clan gradually extended their sway. Muhammadan historians refer to it as Bāndhu, and to the Baghel chief as Rājā of Bāndhu. In 1498–9 Sikandar Lodī, annoyed at the Rājā's refusing him his daughter in marriage, invested Bāndhogarh, but ineffectually, and was obliged to retire, taking his revenge by sacking the country as far as Bāndā. The fort was invested by Asaf Khān in 1563, but the siege was raised on the intercession of other Rājās at Delhi. In 1597 disturbances arose at Bāndhogarh and Rājā Patr Dās was sent to besiege the fort. After an investment of eight months and five days he took it, and subsequently became its governor. Bāndhogarh remained a Muhammadan possession till 1658, when it was restored to Rājā Anūp Singh of Rewah. It was, however, no longer the capital of the State, that position having been given to Rewah. A curious local legend that Akbar was born here is firmly believed. Many old remains are said to exist in the neighbourhood.

[A. Cunningham, *Archaeological Survey of Northern India*, vol. vii, p. 22.]

Bāndra (*Wāndren*, *Bāndora*, *Vāndra*).—Town in the Salsette *tāluka* of Thāna District, Bombay, situated in 19° 3′ N. and 72° 50′ E., on the Bombay, Baroda, and Central India Railway, at the southern extremity of Salsette island, at the point where that island is connected with the island of Bombay by a causeway and arched stone bridge, 9 miles north of Bombay city. Population (1901), 22,075, including 11,358 Hindus, 3,189 Musalmāns, 1,307 Pārsīs, and 6,117 Christians. With a few exceptions, the Christians are descended from local converts made by the Portuguese during the sixteenth and seventeenth centuries. There are numerous Roman Catholic churches in Salsette, many of which were destroyed by the Marāthās after conquering the island in 1738. The buildings of special interest are the English Church and the Chapel of Our Lady of the Mount. Bāndra was constituted a municipality in 1876. The municipal receipts during the decade ending 1901 averaged Rs. 71,000. In 1903–4 the income was a lakh, derived chiefly from water rate (Rs. 32,000) and house and land tax (Rs. 22,000). In the municipal limits are included Bāndra hill, 150 feet in height, with a flat, wooded crest, Bāndra town, and the villages of Naupāda, Khār, Pālī, Vāroda, Chimbai, Katwadi, Māla Sherli, Rājan, and Dānda. The local industries are the tapping of palm-trees and fishing. The Bombay municipal slaughter-house is situated at the north end of the causeway. Since the opening of railway communication, Bāndra has become a favourite place of resort for the citizens of Bombay. It possesses an orphanage and a convent known as St. Joseph's. The town contains a dispensary, a high

school, a middle school for girls with 602 pupils, and two middle schools for boys with 575 pupils. There are also five vernacular schools, four for boys with 267 pupils, and one for girls with 119. Public conveyances ply between the station and Bāndra and Pālī hills, where the European and Pārsī residents chiefly live.

Baned.—Capital of the Suket State, Punjab, situated in 31° 30′ N. and 76° 56′ E., 3,050 feet above sea-level. Population (1901), 2,237. The town is picturesquely situated in a valley. It was founded by Gahrūr Sen, Rājā of Suket, after Kartārpur ceased to be the capital of the State.

Banera.—Chief town of an estate of the same name in the State of Udaipur, Rājputāna, situated in 25° 30′ N. and 74° 41′ E., about 90 miles north-east of Udaipur city, and five miles east of Māndal station on the Rājputāna-Mālwā Railway. Population (1901), 4,261. The town is walled; and on a hill to the west, 1,903 feet above sea-level, and included within the ramparts, stand the fort and palace, the latter being one of the most imposing edifices in Mewār. The estate, which is held by one of the chief nobles, who is styled Rājā, includes the town and 111 villages. The income is about Rs. 88,000, and a tribute of Rs. 4,900 is paid to the Darbār. Banera has formed part of Mewār from very ancient times. Akbar took it about 1567, and during the succeeding hundred years it frequently changed hands. During the latter half of the seventeenth century, Bhīm Singh, the younger son of Rānā Rāj Singh I of Udaipur, proceeded to the court of Aurangzeb and, for services rendered, received Banera in *jāgīr* and the title of Rājā. The fort, which was built about 1726, was taken by the Rājā of Shāhpura about thirty years later, but was recovered by Rānā Rāj Singh II and restored to its rightful owner.

Banga (or Vanga, also called Samatata).—Ancient name for the deltaic tract of Bengal, south of the Padmā river and lying between the Bhāgīrathi and the old course of the Brahmaputra, corresponding with the southern portion of what is now known as Eastern Bengal. It was bounded on the north by the old kingdom of PUNDRA. The inhabitants are described in the *Raghubansa* as possessing many boats, and they are clearly the ancestors of the Chandāls, who at the present day inhabit this part of the country. This tract gave its name to the Province of Bengal.

Banga.—Town in the Nawāshahr *tahsīl* of Jullundur District, Punjab, situated in 31° 11′ N. and 76° 0′ E. Population (1901), 4,697. The principal trade is in sugar, manufactures of brass-ware, and carpenters' work. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 5,900, and the expenditure Rs. 5,700. The income in 1903–4 was Rs. 8,000,

chiefly from octroi; and the expenditure was Rs. 7,200. The town possesses a vernacular middle school maintained by the municipality and a Government dispensary.

Bangāhal.—Canton of the Outer Himālayas in Kāngra District, Punjab, lying between 32° 15′ and 32° 29′ N. and 76° 49′ and 76° 55′ E., and separating Kāngra proper from the outlying subdivision of Kulū. The Dhaola Dhār divides the canton into two main valleys, the northern of which is called Barā or Greater Bangāhal, and the southern Chhotā or Lesser Bangāhal. The former, with an area of 290 square miles, contains but a single village, with a few Kanet families, 8,500 feet above sea-level. The Rāvi river has its source in this valley, and is a considerable stream before it issues into the State of Chamba, the mountains rising steeply from its banks into peaks of 17,000 and even 20,000 feet, covered with glaciers and perpetual snow. The lower ravines contain much pine forest, and the upper slopes afford grazing for large flocks. Chhotā Bangāhal is again divided by a range, 10,000 feet in height, into two glens. In the eastern, which contains eighteen scattered hamlets of Kanets and Dāghis, rises the Ul river; and the western, known as Bīr Bangāhal, resembles the higher valleys of Kāngra proper.

Bangalore District.—District in the south-east of Mysore State, lying between 12° 15′ and 13° 30′ N. and 77° 4′ and 77° 59′ E., with an area of 3,092 square miles. It is bounded north and east by Kolār and the Salem District of Madras; west by Tumkūr and Mysore Districts; south by the Coimbatore District of Madras.

Physical aspects.

The main portion of the District consists of the valley of the Arkāvati, with the Cauvery flowing at the southern base. The east includes the upper basin of the Ponnaiyār, the south-west a part of the basin of the Shimsha. The central, southern, and eastern parts are mostly open and undulating. Westward the country is broken and rugged, with a succession of hills, the eastern watershed of the Cauvery rising in places to lofty mountain peaks, such as Sivaganga (4,559 feet) and Sāvandurga (4,024 feet). The low-lying lands contain series of tanks; the uplands are often bare or covered with scrub jungle. The hills in the south, as well as Sāvandurga, are surrounded with forest.

The prevailing rock is gneiss, disrupted by trap seams, dikes, and large outcrops, and also by porphyritic and fine-grained granite rocks, rock crystal, amethystic smoky and milky quartz. Adularia, pink felspar, chert, corundum, chalcedony, mica, and hornblende are found. Hematitic iron ore is abundant. Nodular limestone is found in the valleys, and near Kānkānhalli is a formation of industrial lime. Kaolinitic clays occur, and laterite is found as a flat capping, resting on the denuded surface of gneiss.

The hilly parts to the west contain many plants of the Malnād, but of smaller size, such as *Sterculia*, *Erythrina*, &c. But the greater part of the vegetation of the District is made up of plants such as *Alangium Lamarckii*, *Heptapleurum venulosum*, *Cassias*, *Bassias*, *Acacias*, *Ficus*, *Bauhinias*, *Mangifera*, *Pongamia*, &c. *Casuarina equisetifolia* is a common exotic, and *Lantana Camara* is spreading in rank growth.

The climate of Bangalore city is noted for its salubrity, and the tracts north and east are healthy; but the *tāluks* traversed by the western range of hills are subject to malarious fever. The annual rainfall at Bangalore averages 35 inches. The southern *tāluks* get more, and Nelamangala less. The wettest months are generally September and October. The average mean temperature and diurnal range at Bangalore are: in January, 69° and 23°; in May, 80° and 22°; in July, 74° and 16°; in November, 71° and 17°.

History.

Till 1004 the District was a part of the Ganga kingdom of Gangavādi. In the seventh century Mankunda (in the Channapatna *tāluk*) was the royal residence, and in the eighth century Mānyapura (Manne, in the Nelamangala *tāluk*). Traces also exist of the Pallavas in the east, and of the Rāshtrakūtras in the north. The Cholas next held the District until 1116, giving it the name of Vikramachola-mandala. The Hoysalas followed until 1336, when the Vijayanagar kingdom was established. Early in the next century certain Morasu Wokkaligas from the east formed states tributary to Vijayanagar, those in this District being YELAHANKA, DEVANHALLI, and DOD-BALLĀPUR. HOSKOTE belonged to a chief in Kolār District. Kempe Gauda, a Yelahanka chief, founded Bangalore in 1537, and his son acquired MĀGADI and SĀVANDURGA. Meanwhile, under the name of the Sivasamudram[1] country, much of the District seems to have been subject to the chief of Ummattūr (Mysore District), till he was put down by the Vijayanagar king in 1510. After the fall of Vijayanagar in 1565, Jagadeva Rāya, the chief of Bāramahāl (Salem District), repelled the Musulmān atttack on Penukonda in 1577, and was rewarded with territory in Mysore, his capital being fixed at Channapatna. In 1644 the District came under the rule of Bijāpur, and was given, with other neighbouring tracts, as a *jāgīr* to Shāhji, father of the Marāthā leader Sivajī. In 1687 the Mughals overran the country to the north, and formed the province of SĪRA (Tumkūr District). At this time Bangalore was sold to the Mysore Rājās, who by the end of the seventeenth century had gained possession of the whole District, except Hoskote and Dod-Ballāpur, which were acquired soon after.

[1] The name is that of the island at the Falls of the Cauvery, where the chief had his fortress and the temple of his family god.

Kistvaens have been explored near Jāla and Sāvandurga, and found to contain the usual articles of pottery. A find of Roman coins at Yesvantpur in 1891 yielded silver *denarii* of the early emperors Augustus to Claudius. In the Museum is an inscribed stone of the end of the ninth century, brought from Begūr, elaborately sculptured with a battle scene. In the Bangalore fort are the remains of Tipū Sultān's palace. The inscriptions of the District have been translated and published.

Population.

The population was 842,233 in 1871, 679,664 in 1881, 802,994 in 1891, and 879,263 in 1901. The decrease in 1881 was due to the famine of 1876–8. By religion, in 1901 there were 767,413 Hindus, 73,944 Musalmāns, 25,705 Christians, 11,269 Animists, 837 Jains, and 95 'others.' The density was 284 persons per square mile, that for the whole State being 185. BANGALORE CITY (population, 159,046), the District head-quarters, is the only place with more than 20,000 inhabitants.

The following are the principal statistics of population in 1901:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Bangalore	347	4	367	264,049	763	− 2·1	37,044
Nelamangala	272	2	337	71,952	264	+ 14·0	3,544
Māgadi	359	1	334	76,986	215	+ 19·7	3,205
Dod-Ballāpur	341	1	342	74,609	219	+ 13·7	3,478
Devanhalli	235	2	284	60,537	257	+ 12·9	2,792
Hoskote	272	2	365	72,855	269	+ 20·1	3,094
Anekal	190	3	202	60,071	316	+ 9·5	2,484
Kānkānhalli	623	1	252	83,577	134	+ 16·3	2,902
Channapatna	453	2	267	114,627	253	+ 15·4	4,891
District total	3,092	18	2,750	879,263	284	+ 9·4	63,434

The numerically strongest caste is the Wokkaligas or cultivators, 244,000; next, the outcaste Holeyas and Mādigas, 95,000 and 51,000; then Kurubas or shepherds, 39,000; Tigalas or market gardeners, 32,000; Woddas or stonemasons, and Neygi or weavers, 24,000 each. Of Lingāyats there are 39,000 and of Brāhmans 30,000. Among Musalmāns there are 36,000 Shaikhs, 12,300 Saiyids, and 12,000 Pathāns. The nomad tribes are represented by 5,300 Koracha or Korama, and 3,800 Lambānis. As regards occupation, 54 per cent. of the population are engaged in pasture and agriculture, 15 per cent. in the preparation and supply of material substances, 7 per cent. in unskilled labour not agricultural, and 6 per cent. in the State service.

Bangalore District contains more than half of the 50,000 Christians in the State of Mysore, and nearly one-third of the total are in the

Civil an Military Station of Bangalore. Of native Christians the great majority are Roman Catholics. A chapel is said to have been built by a Dominican friar at Anekal so far back as 1400. Bangalore and Devanhalli were occupied by Jesuit priests in 1702, and Kānkānhalli in 1704. A bishop resides at Bangalore, where the Roman Catholics have important educational and medical institutions, while they have formed two agricultural settlements in the District for famine orphans. The Anglican and Scottish churches are mainly for the European garrison of Bangalore, but the chaplains also visit Whitefield and Chik-Bānāvar. For natives, the Church of England S.P.G. Mission has a church, and the Zanāna Mission has a *gosha* hospital for females and schools. The latter has also established a *gosha* hospital at Channapatna. The London and the Wesleyan Missions began work among the natives, in Bangalore, in 1820 and 1822 respectively. The sphere of the former is to the east and north of the District, and that of the latter to the west and south. They have places of worship and large schools in Bangalore. The Wesleyan Mission press was for many years of great importance, but has now been removed to Mysore. The American Methodist Episcopal Mission was established in Bangalore in 1880, in the parts mostly occupied by Eurasians. There are also small communities of Baptists and Lutherans, both at Bangalore.

Agriculture.

The prevailing soil is a fertile red loam, found in every shade from light to dark red and deep chocolate. It overlies the metamorphic granite, and varies from a few inches to several feet in depth. The darker rich red and chocolate soils are supposed to be mould weathered from the trap rocks. The decomposition of the normal gneissose rock gives the grey, sandy, and sterile soils, and the kaolinitic clays. There are a few isolated tracts of black soil, but not sufficient for the special cultivation usual in such ground.

The following are the statistics of cultivation in 1903–4:—

Tāluk.	Area in square miles, shown in the revenue accounts.				
	Total.	Cultivated.	Irrigated.	Forests.	Cultivable waste.
Bangalore	255	130	22	6	22
Nelamangala	232	125	11	6	15
Māgadi	301	123	11	17	16
Dod-Ballāpur	290	110	11	20	41
Devanhalli	179	67	15	2	16
Hoskote	210	75	19	6	12
Anekal	161	78	13	8	6
Kānkānhalli	591	141	2	197	7
Channapatna	408	153	16	106	5
Total	2,627	1,002	120	368	140

Rāgi is the principal crop. In 1903–4 *rāgi* occupied 601 square

miles, rice 98, gram 91, other food-grains 107, oilseeds 36, orchards and garden produce 16, fodder crops 11. Coffee has been successfully grown in the plains, with irrigation, but the fall in prices has stopped its cultivation. Numerous private plantations have been formed of grafted mango-trees, and of casuarina for fuel.

From 1891 to 1904, 1·37 lakhs was advanced for irrigation wells. Loans for land improvement during the eight years ending 1904 amounted to Rs. 55,000.

There are no irrigation canals, but 109 square miles are supplied from tanks and wells, and 11 from other sources. The number of tanks is 1,969, of which 402 are classed as 'major.'

The area of State forests in 1904 was 322 square miles, of 'reserved' lands 74, and of plantations 19. Teak grows, but not at its best. Casuarinas supply scaffolding poles and fuel. Sandal-wood and bamboos are important products. The forest receipts in 1903–4 were Rs. 77,000.

There are no mines. Gneissose stone is everywhere quarried for building purposes, and broken up for road-metal. Limestone is found, as well as pottery clay.

Trade and communications.

Bangalore city contains woollen, cotton, and silk-mills, tile and brick works, oil-mills, coffee-curing works, an iron foundry, and brass and copper works, under European management; breweries, partly under European and partly under native management; and tanneries, under Muhammadans. The number of private looms or small works in the District is: for silk, 370; cotton, 4,647; wool, 681; other fibres, 25; wood, 92; iron, 209; brass and copper, 28; building materials, 94; oil-mills, 481; jaggery and sugar, 597.

The chief articles of commerce are grain, cloth, silk, and oilseeds. Cotton cloth and coarse woollen blankets are woven in all parts. Tape for bedsteads and cotton carpets are made at Sarjāpur. Good drugget carpets are produced in Bangalore, but the demand for them is not so great as in former days. Silks of stout texture and costly patterns are also woven in Bangalore. The production of raw silk is a reviving industry; and inspectors of sericulture, trained in Japanese methods at Mr. Tata's silk farm in Bangalore, have been appointed for its improvement. Steel wire of a superior quality, for strings of musical instruments, is made at Channapatna, where also lacquered ware and toys are manufactured. Iron and steel are produced to some extent in Māgadi. Oil-pressing from castor, ground-nuts, and gingelly seed is general. Bangalore city is a centre for numerous industries ministering to the wants of Europeans. In addition to the city, the chief marts of trade in the District are Channapatna, Dod-Ballāpur, Sarjāpur, Vadigenhalli, Tyāmagondal, and Hindigināl.

The railway system radiates from Bangalore city, and the total length

of railways in the District is 130 miles. The Bangalore branch of the Madras Railway, broad gauge, runs east to Jalārpet. The remaining lines, metre gauge, are the Mysore State Railway, south-west to Mysore and Nanjangūd; and the Southern Mahratta Railway, north to Guntakal and north-west to Poona. A light railway, 2 feet gauge, is projected to run north to Chik-Ballāpur. Provincial roads, leading to Madras, Salem, Hindupur, Bellary, Mangalore, and Cannanore, have a total length of 230 miles. The total length of District roads is 448 miles. All main roads are metalled.

Famine.

Since the great famine which ended in 1878, scarcity owing to failure of the rainfall has been felt in parts of the District in 1884-5, in 1891-2, and in 1896-7; but remedial measures were adopted, principally in providing facilities for grazing in 'reserved' lands, and distress was not serious.

Administration.

The District is divided into nine *tāluks*: ANEKAL, BANGALORE, CHANNAPATNA, DEVANHALLI, DOD-BALLĀPUR, HOSKOTE, KĀNKĀNHALLI, MĀGADI, and NELAMANGALA. The District is under a Deputy-Commissioner; and since 1903 the *tāluks* have been formed into three groups under Assistant Commissioners. The groups are: Dod-Ballāpur, Devanhalli, and Nelamangala, with head-quarters at Nelamangala; Bangalore, Hoskote, and Anekal, with head-quarters at Bangalore; Kānkānhalli, Channapatna, and Māgadi, with head-quarters at Closepet.

Besides the Chief Court, whose jurisdiction extends over the whole State, there are the District court and the Subordinate Judge's court, both with jurisdiction over Bangalore, Kolār, and Tumkūr Districts, and three Munsifs' courts. All are in Bangalore, except one Munsif's court at Dod-Ballāpur. Serious crime is not common.

The land revenue and total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	8,60	10,62	12,17	12,29
Total revenue . .	16,74	22,71	23,17	24,77

The revenue survey and settlement were carried out in Bangalore and the west of the District between 1872 and 1879, in the north and east between 1881 and 1886, and in the south between 1891 and 1896. The incidence of land revenue per acre of cultivated area in 1903-4 was Rs. 1-10-3. The average assessment per acre on 'dry' land is Rs. 1-1-8 (maximum scale Rs. 2-12-0, minimum scale R. 0-1-0); on 'wet' land, Rs. 4-12-10 (maximum scale Rs. 10-0-0, minimum scale R. 0-7-0); and on garden land, Rs. 4-15-8 (maximum scale Rs. 20, minimum scale Rs. 2).

Excluding the Civil and Military Station of Bangalore, which is under British administration, there were 13 municipal boards in 1904, and 4 Unions. The municipalities are Bangalore city, Hoskote, Dod-Ballāpur, Nelamangala, Tyāmagondal, Kānkānhalli, Māgadi, Closepet, Channapatna, Anekal, Sarjāpur, Devanhalli, and Vadigenhalli. The Unions are Yelahanka, Kengeri, Sūlibele, and Dommasandra. Apart from Bangalore city, the total municipal income in 1903-4 was Rs. 37,000, and the expenditure Rs. 39,000; those of the Unions were Rs. 3,900 and Rs. 7,400. The District and *tāluk* boards in that year had an income of Rs. 73,000 and an expenditure of Rs. 70,000, the cost of public works being Rs. 61,000.

The police force in 1903-4 consisted of 3 superior officers, 132 subordinate officers, and 826 constables, of whom 38 officers and 289 constables form the city police. The Bangalore Central jail has accommodation for 892 prisoners. The daily average in 1904 was 684. There are also nine lock-ups, with a daily average of seven prisoners.

The percentage of literate persons (excluding the Civil and Military Station of Bangalore) in 1901 was 20·5 in the city and 4·3 in the District (10·4 males and 0·9 females). The number of schools increased from 520 with 19,811 pupils in 1890-1 to 563 with 19,819 pupils in 1900-1. In 1903-4 there were 588 schools (409 public and 179 private) with 20,186 pupils, of whom 3,977 were girls. The Civil and Military Station of Bangalore contained in 1903-4, in addition, 117 schools (62 public and 55 private) with 6,931 pupils (4,234 male, 2,697 female), besides schools under the military authorities. The colleges are the Central, of the first grade, and St. Joseph's, of the second grade, with college classes for girls at the Sacred Heart. Of special schools, there are two industrial, one commercial, and one training school.

Besides the large hospitals in Bangalore, there were 16 dispensaries in the District in 1904, at which 226,000 patients were treated, of whom 4,520 were in-patients, the beds available being 123 for men and 83 for women. The total expenditure was 1·57 lakhs.

The number of persons vaccinated in 1904 was 8,797, or only 10 per 1,000 of the population.

Bangalore Tāluk.—Central *tāluk* of Bangalore District, Mysore, lying between 12° 48′ and 13° 10′ N. and 77° 25′ and 77° 47′ E., with an area of 347 square miles. The population fell from 269,683 in 1891 to 264,049 in 1901, the decrease being chiefly due to plague. The *tāluk* contains one city, BANGALORE (population, 159,046), the headquarters; two towns, YELAHANKA (2,437) and Kengeri (1,608); and 367 villages. Excluding the Civil and Military Station, the land revenue demand in 1903-4 was Rs. 1,65,000. The greater part of the *tāluk* drains to the east into the Ponnaiyār, through two streams which

form continuous chains of tanks. In the west a stream rising at the Bull temple, south of Bangalore, flows into the Arkāvati. The south-west is rocky and hilly; the remainder is an open, well-cultivated country, undulating much towards the north-west.

Bangalore.—The seat of government of the Mysore State, and head-quarters of the Bangalore Brigade of the Indian army, situated in 12° 58′ N. and 77° 35′ E., 219 miles by rail from Madras, and 692 from Bombay. Total population (1901), 159,046. It covers an area of 25 square miles, and is composed of two separate but adjacent parts: Bangalore city (the Petta, Pete, or original native town of Bangalore proper), under the Mysore State; and the Civil and Military Station (formerly called the cantonment), an 'assigned' tract under British administration through the Resident at Mysore.

Bangalore city has been largely extended of recent years, especially since the outbreak of plague in 1898, and now covers an area of 11 to 12 square miles, extending from the Imperial Service Lancer lines in the north to the Bull temple in the south, a distance of 7 miles, and from Cubbon Park in the east to Chāmrājpet in the west, about 4 miles. The population during the last thirty years has been: (1871) 60,703, (1881) 62,317, (1891) 80,285, and (1901) 69,447; the decrease since 1891 is due to plague. Hindus number 57,000, Musalmāns 8,500, and Christians 3,200; of the rest, 565 are Animists. The city is divided into nine municipal divisions: namely, Palace, Balepete, Manivartapete, Halsūrpete, Nagartapete, Lāl Bāgh, Fort, Basavangudi, and Mallesvaram. The municipal board is composed of a president, five other *ex-officio* and five nominated members, appointed by the State, and thirteen elected members. The privilege of election was granted in 1892. The income and expenditure during the ten years ending 1901 averaged 1·6 lakhs. In 1903–4 the income was 2·4 lakhs, including octroi (Rs. 55,000), house tax (Rs. 42,000), and tolls (Rs. 22,000). The expenditure was 2½ lakhs, the chief items being Rs. 87,000 for public works, Rs. 35,000 for conservancy, and Rs. 33,000 for charitable grants and education.

The name is properly Bengalūru, the *ūrū* or 'town' of *bengalu* or 'beans.' The Hoysala king Vīra Ballāla, it is said, became separated from his attendants when hunting and was benighted. Faint and weary, he came upon a solitary hut, in which was an old woman, who could give him only some *bengalu* or beans boiled in a little water. Sharing this humble fare with his horse, he passed the night at the hut. The incident soon became known, and the *ūru* or village which sprang up was called the Bengal-ūru. It was situated to the north, beyond Kodigehalli, and is now known as Old or Hale Bengalūru. Bangalore was founded in 1537 by Kempe Gauda, the chief of Yelahanka, and a watch-tower at each of the cardinal points marks the limits to which it

was predicted it would extend, a prophecy now more than fulfilled. The first extension was Chāmrājpet, from the fort westwards, in 1892. In 1899 were added the Basavangudi extension, south from the fort, and the Mallesvaram extension, north from the city railway station. The fort, which lies south of the original town, has not been used for any military purpose since 1888. First constructed of mud, it was enlarged and built of stone in 1761, under Haidar Alī, captured by the British in 1791, subsequently dismantled by Tipū Sultān, but restored in 1799. The walls have now been pierced for roads, a part pulled down, and the moat filled up, providing a site for the Victoria Hospital. The most important buildings included in the city are the Mahārājā's Palace to the north, and the range of public offices in Cubbon Park. East from the fort is the Lāl Bāgh, or State Botanical gardens, which date from the time of Haidar Alī. The Central College is the principal educational institution, and a site to the north of the city has been selected for the Indian Institute of Research for post-graduate study, founded from Mr. Tata's endowment.

On the west of the city are large spinning and manufacturing mills, woollen, cotton, and silk-mills, oil-mills and soap factory, brick and tile works; southwards, a silkworm farm under Japanese management; and to the south-west, the distillery. Near the city railway station are locomotive workshops and an iron foundry. Near the cantonment railway station are large coffee-curing works, where also artificial manures are prepared.

The water-supply, which was provided in 1896, is pure and abundant. The water is drawn from the Hesarghatta tank on the Arkāvati, 13 miles to the north-west, and pumped to the top of a small hill at Bānavar, whence it runs by gravitation through cast-iron pipes to settling and filtering beds near the city, and thence to a subterranean reservoir at the race-course, from which it is distributed to all parts. The daily supply provided is a million gallons. The drainage of the city is collected into one main channel, which runs out from the southern side of the old town and is continued as far as the Sunnakal tank, a distance of 2 or 3 miles, where the sewage is applied to agricultural purposes. Since 1905 the city has been lighted by electricity transmitted from the Cauvery Falls at Sivasamudram, and power from the same source works the woollen and cotton-mills.

The Civil and Military Station of Bangalore adjoins the city on the east, and covers an area of 13 square miles, extending from the Residency on the west to Binnamangala on the east, about 4 miles, and from the Tanneries on the north to Agram on the south, about 5 miles. It is intended to remove the sapper lines to a new site on the north-west, which will allow of the congested parts being opened out by an extension northwards, similar measures in Bangalore city and

Mysore having virtually freed those cities from plague. The population at each Census in the last thirty years has been: (1871) 81,810, (1881) 839,540, (1891) 100,081, and (1901) 89,599. The decrease since 1891 is due chiefly to plague, but also partly to the absence of troops in 1901 at the seats of war in South Africa and China. By religion there are 51,000 Hindus, 21,500 Musalmāns, and 17,000 Christians. The cantonment was established in 1809 on the removal here of the British garrison from Seringapatam, which had proved too unhealthy for the troops. But the head-quarters were at first in the fort, where also the principal Europeans lived. The name 'cantonment' was applied till 1881. On the rendition of Mysore in that year, the area was made over to the British as an 'assigned' tract, and under the present designation became subject to the administration of the Resident.

The garrison includes three batteries of artillery, and regiments of British cavalry and infantry, Native cavalry, sappers and miners, pioneers, and Native infantry (2), mounted infantry, supply and transport corps, and mule corps. There are, besides, the Bangalore Rifle Volunteers; and, in Bangalore city, under the jurisdiction of the Darbār, the Mysore Imperial Service Lancers transport corps and the Mysore Barr infantry.

The Station municipal board is composed of 6 *ex-officio* and 18 non-official members, the latter being elected, with the District Magistrate as president. There are six divisions or wards: Halsūr (Ulsoor), Southern, East General Bazar, West General Bazar, Cleveland Town, and High Ground. The elected commissioners are so apportioned among them as to represent the several classes in each. There are thus 6 Europeans and Eurasians, 4 Muhammadans, and 8 Hindus and others. The income and expenditure during the ten years ending 1901 averaged 3·2 lakhs. In 1903-4 the income was 3·7 lakhs, including 2·4 lakhs from rates and taxes, and Rs. 85,000 from rents and fees. The expenditure was 3·5 lakhs, the chief items being 1·3 lakhs for public works, and 1·2 lakhs for the medical and health department.

The water-supply is drawn from the same source as for the city, namely, the Hesarghatta tank, but by an independent system of pumping-works, filter-beds, and pipes, to a reservoir on the High Ground. The daily supply is calculated at a million and a half gallons. The drainage of a large area of the Station is carried by a sewer passing through a tunnel to some distance beyond Halsūr, where it is applied to cultivation. The most noticeable public buildings are the Residency, the District offices, and the Bowring Institute.

The 'assigned' tract occupied by the Civil and Military Station is under the control of the Resident, and is provided with the various departments of administration separate from those of the Mysore State. Revenue work is performed by the Collector and District Magistrate.

For police there is a Superintendent, with 39 officers and 238 constables. The police jurisdiction extends also over railways (327 miles), for which purpose there are 18 additional officers and 118 men. The criminal courts include the bench of honorary magistrates, the courts of the second magistrate, who is the officer in charge of the Resident's treasury, of the Railway first-class magistrate, who is the Superintendent of railway police, of the District Magistrate, and of the Sessions Judge, who is the First Assistant Resident. The District Judge exercises civil jurisdiction, under the control of the Resident's Court, which is the High Court for the station, for both criminal and civil purposes. There is no separate jail, prisoners under sentences not exceeding one year's imprisonment being detained in the Bangalore Central jail of the Mysore State, while others are sent to jails in the Madras Presidency. The medical institutions are under the Residency Surgeon; and the educational institutions, most of which are aided (60 with 4,877 pupils), are under the departmental control of the Director of Public Instruction, Madras.

The revenue of the 'assigned' tract in 1903-4 was nearly $7\frac{1}{2}$ lakhs, and the expenditure exceeded $7\frac{3}{4}$ lakhs.

Banganapalle.—One of the five Native States in political relations with the Madras Government, the Political Agent being the Collector of Kurnool. It lies between 15° 3′ and 15° 29′ N. and 77° 59′ and 78° 22′ E., on the table-land of the Southern Deccan within Kurnool District, at a height of about 800 feet above sea-level. It is bounded on the north by the Rāmallakota and Nandyāl *tāluks* of that District, on the east and south by Nandyāl and Koilkuntla, and on the west by Pattikonda and Koilkuntla. The total area is 255 square miles. The State consists of two detached portions. The main part is a straggling area beginning at the Rāmpur pass over the Erramala hills on the west and extending eastwards to Banganapalle town, and thence southwards almost parallel to the Kunderu river through a tract of rich black cotton soil. The detached portion consists of three hill villages, comprising an area of about 20 square miles surrounded by part of the Koilkuntla *tāluk*. Except the Erramalas, which skirt the country on the west, two long spurs running parallel to one another in the western portion and enclosing the valley of the Jurreru, there are no hills of importance in the State. Even these are low and tame in appearance. The country is generally flat; but the western arm, extending from the Rāmpur pass to Banganapalle town, is hilly. It is also generally bare, except in the west and round Banganapalle, where the Nawāb has planted groves of trees. The surface is covered with black cotton soil in the south, and in the other parts with red gravelly earth, sometimes very stony. The whole country slopes eastward to the Kunderu, and is well drained by

Physical aspects.

that river and the Jurreru, which are the chief streams. The Jurreru rises in the Erramalas, flows past Banganapalle town, and enters the Kunderu after a course of 45 miles. A small stream called the Paleru crosses the southern limb of the territory. The Jurreru alone, which is perennial, is used for irrigation.

The geology of Banganapalle is simple. The lowest rocks are of the Cuddapah formation, and occupy the bottom of the Jurreru valley between Banganapalle town westward and Pasupula. They consist chiefly of argillites, with intercalated trap flows of the Cheyyār group. Resting on them is a strip of conglomerate, west of the town, which has been mined for diamonds for many generations. There are no forests yielding revenue.

The larger game include leopard, hyena, wolf, antelope, and wild hog; and the feathered game, partridge, quail, and jungle-fowl. The streams abound in fish of inferior kinds.

The climate is hot, but healthier than the surrounding portions of Kurnool District. November, December, and January are pleasantly cool and dry; February, March, April, and May are increasingly hot; in June, July, August, and September the south-west monsoon brings heavy rain and high winds. The annual rainfall averages about 30 inches. Fever is endemic, but is nowhere of a severe type.

History.

The oldest extant title-deed of the family, which is dated in 1761, records the fact that the Nizām in that year appointed one Husain Alī Khān as Kiladār (commandant) and Faujdār (magistrate) of Banganapalle. This document refers to the removal of one Muhammad Beg Khān, apparently from the post given to Husain Alī Khān; but the nature of that transaction is not indicated. It would seem, however, from the manuscript records of the family that Muhammad Beg Khān was the great-grandfather of Husain Alī Khān, and the adopted son of a person of the same name appointed Kiladār of Banganapalle by the Sultān of Bijāpur in the last half of the seventeenth century. A document still preserved at Banganapalle bears the seal of Muhammad Beg Khān and the date 1131 Hijra (A.D. 1718–9).

Within a few years the country fell under the dominion of Mysore. A translation of a letter of confirmation, dated 1783, at the beginning of Tipū's reign, is preserved in the archives of the Madras Government. In this letter Tipū refers to the assiduity of the recently deceased Husain Alī Khān in the Sarkār affairs, and confers the *jāgīr* of Banganapalle on his son Ghulām Alī Khān. As a matter of fact, it would appear that, notwithstanding this grant, Tipū at once resumed the *jāgīr*, and expelled Ghulām Alī Khān. Letters written by Tipū in the same year summon Ghulām Alī Khān to his presence and refuse to accept his excuses for not coming. Another, dated 1790, to the Kiladār of

Banganapalle, is addressed to one Yūsuf. According to the traditions of the family, Tipū's deputy was defeated in a pitched battle by Ghulām Alī Khān and his uncle Asad Alī Khān about seven years after Ghulām Alī Khan's expulsion. A document is extant purporting to be an order of the Nizām, dated 1790, conferring Banganapalle on Asad Alī Khān and Ghulām Alī Khān. It is, however, of doubtful authenticity. These two persons are referred to as joint *jāgīrdārs* in the correspondence of the year 1800. The present family traces its descent from Ghulām Alī Khān, who survived his uncle. In 1800, when the Nizām handed over Kurnool and the other Ceded Districts to the East India Company in exchange for a subsidiary force to be stationed in his territories, he transferred to the Madras Government his control over Banganapalle. At the same time he stipulated that, as it was the sole means of subsistence of a numerous family, the *jāgīr* should be continued to Asad Alī Khān and Ghulām Alī Khān; and this was agreed to by the British representative.

Whatever had been the precise relations of the *jāgīrdārs* to the court of Hyderābād, the British at first neither levied tribute from them nor, as far as can be ascertained, exercised any authority over them. Indeed the *jāgīrdār* as late as 1821 seemed to consider himself still dependent on the Nizām. He usually resided at Hyderābād, and civil and criminal justice were nearly at a standstill. Internal government went from bad to worse, and at times shameful disorder prevailed. Finally (1831) the *jāgīrdār* was driven out of the country and took refuge in British territory. These disturbances induced the British Government to resume the *jāgīr* in 1832. The Government did not at this time consider that they were pledged to its continuance, and a proclamation notifying the resumption was issued in 1835. From 1835 to 1848 the State was accordingly administered by the Madras Government. The stipulation of the Nizām for the continuance of the *jāgīr* was, however, brought to notice in 1837; and the Court of Directors decided in the following year that the Nizām's stipulation entitled the holder of the estate to be treated as an hereditary *jāgīrdār*, that the resumption must be cancelled, and the *jāgīr* given back as soon as it was free from debt. Accordingly in 1848 it was restored to the head of the family, Ghulām Muhammad Alī, grandson of Ghulām Alī Khān; and, as had been the case before 1831, he was permitted to enjoy the *jāgīr* without payment of tribute and to administer its civil and criminal justice with certain restrictions. A *sanad* conferring these powers was issued in 1849. In 1862 another *sanad* was granted to him, guaranteeing that the British Government would permit any succession to the *jāgīr* which might be legitimate according to Muhammadan law.

Ghulām Muhammad Alī died in 1868, and was succeeded by his nephew Fateh Alī Khān, who received the hereditary title of Nawāb

in 1876. In consequence of his misgovernment, he was removed in January, 1905, from the direct administration of the State, which was placed under the management of an Assistant Political Agent. Fateh Alī Khān died three months later, and was succeeded by his son Saiyid Ghulām Alī Khān, thirty-one years of age, who had been educated privately at Banganapalle and Kurnool. His succession has been recognized, but he has not yet received a *sanad*, and the Assistant Political Agent meanwhile continues to conduct the administration.

Population.

The number of villages in the State is 63, and there are no towns. The population was 45,208 in 1871, 30,754 in 1881, 34,596 in 1891, and 32,264 in 1901. It will be seen that the State has not yet regained the inhabitants lost during the great famine of 1876–8, and that even the last decade shows a decline. Banganapalle town was formerly a place of some importance, owing to its position on the main road from Gooty to Cumbum; but it has declined greatly since the opening of the Southern Mahratta Railway, and its present population is less than 4,000.

Though the density of the population is a little higher than in the surrounding District of Kurnool, the State is most sparsely peopled, there being only 127 persons per square mile against an average of 270 for the Presidency. The ruler is a Muhammadan; but the majority of the population are Hindus, who number 25,735, or nearly 80 per cent. of the total. The Muhammadans come next, being 6,232, or 19 per cent.; many of them live in Banganapalle town. The Christians number only 297, and there are no missions in the State. Telugu is the prevailing language, being spoken by 81 per cent. of the population, and Hindustāni is more prevalent than in Kurnool, being the vernacular of 17 per cent.

The Kāpus, the chief agriculturist caste of the Telugu country, are the most numerous community among the Hindus, forming nearly 21 per cent. of the total. Next in order come the Mālas and Mādigas, who correspond to the Paraiyans and Chakkiliyans of the south. The Gollas (shepherds) number 2,421, and the Boyas or hunting caste 2,286.

Among Musalmāns, the Shaikhs are the most numerous tribe, being 77 per cent. of the total. Next come the Saiyids, who number 16 per cent. The Musalmāns in the State are mostly Sunnis, though the Nawāb himself is a Shiah. The Christian population consists almost wholly of natives.

Agriculture.

The general agricultural conditions and practice differ but little from those in the neighbouring British *tāluks* of Kurnool District. The chief food-grains grown are *cholam* (*Sorghum vulgare*), *cambu* (*Pennisetum typhoideum*), *rāgi* (*Eleusine coracana*), rice, *korra* (*Setaria italica*), and wheat. Bengal gram is the most

important of the pulses, and cotton is the most widely cultivated industrial crop.

No accurate statistics are available of the total area of the State, or of the forest, arable, occupied, and cultivated areas. The Nawāb had the *jāgīr* surveyed recently by a British survey party working under the Deputy-Superintendent of Revenue Survey, Kurnool. The total area, excluding hill blocks, was found to be 218 square miles, but further details are not available. The total occupied area is returned as 74,284 acres, of which 72,333 acres are 'dry' land, 1,277 acres 'wet,' and 674 acres garden. These figures include 21,870 acres of sub-*jāgīrs* which till recently were enjoyed as estates by the relations of former Nawābs. No reliable statistics of cultivation exist.

There are no irrigation works of importance. About twenty dams are periodically constructed across the Jurreru and water is diverted to small tanks. Only one tank is of any importance, but a good deal of cultivation is supplied by wells sunk on the banks of the Jurreru.

Lime is found at Palkūr and among the hills. Many years ago, copper is said to have been obtained; and quite recently a Madras merchant stated that he had found traces of copper and coal and diamond shale, and he has obtained a lease for the mining of these over 18 square miles. About a mile to the east of Banganapalle town is a small diamond mine, which formerly yielded some stones but is not worked now. The revenue from diamonds is estimated at Rs. 2,300 in the schedule to the *sanad* of 1761.

Trade and communications.

The principal exports are *cholam*, *ghī*, skins, mangoes, oranges, and lacquer-ware. For the last three of these the town of Banganapalle is noted. The principal imports are rice, sugar, cloths, salt, jaggery (coarse sugar), and kerosene oil.

The only roads are the Rāmpur pass, over the Erramalas, running from west to east through the heart of the State, and the Paniem-Owk connecting the Paniem railway station with Banganapalle town. These two join within a mile of Banganapalle. The former was constructed by the Kurnool District board, and was once an important trade route between the east coast and the Districts of Anantapur and Bellary. It crosses the Nallamalais by the Nandikanama pass and the Erramalas by the Rāmpur pass. It is now very little used and consequently neglected. The other road was constructed by the Nawāb to connect his capital with Paniem railway station, which is 17 miles distant, and was continued to the south to link it with the Owk-Tādpatri frontier road. It is maintained in good condition. The total length of the roads is 53 miles, but they have till now been very badly maintained. A road cess is levied for the purpose.

Famine. The State is situated within the famine zone of the Presidency and suffered severely in the great distress of 1876–8. It was also affected by all the other bad seasons which have afflicted Kurnool.

Administration. The administration was till recently conducted by the Nawāb in person with the assistance of a Dīwān, who was an officer in the British service with a salary of Rs. 250 a month. The removal, at the beginning of 1905, of the Nawāb from the direct management of the *jāgīr* and the temporary substitution of an Assistant Political Agent have already been mentioned. The latter is now administering the State personally without a Dīwān. He is assisted by a *tahsīldār*, who is responsible for the revenue administration.

There are two civil courts, called the Adālat Court and the Sadr Court. The former is presided over by a Munsif, who is empowered to decide suits up to the value of Rs. 3,000. Original suits above that amount should only be filed in the Sadr Court, which used to be presided over nominally by the Nawāb, but in practice by the Dīwān. The Assistant Political Agent is now president. All appeals from the Munsif's decisions lie to this court. No special authority exists by which the civil courts exercise power over natives of British India or European British subjects.

Two courts exist for the administration of criminal justice: namely, the magistrate's court and the Sadr Court. The former is presided over by a magistrate, who is empowered to award imprisonment for a term not exceeding one year, a fine not exceeding Rs. 500, and whipping up to twelve stripes. The Sadr Court, presided over formerly by the Nawāb or Dīwān but now by the Assistant Political Agent, is both a Court of Session and an Appellate Court to which appeals from the magistrate's decisions are preferred. The powers of the Sadr Court are unlimited, except that sentences of mutilation are absolutely prohibited and that capital sentences must be confirmed by the Government of Madras.

The law relating to offences and criminal procedure which applies in British India is followed in Banganapalle. The powers of the courts are absolute, subject to the limitations mentioned above, as regards natives of the State and natives of British India who have committed offences and remain in the State. As regards natives of India who have escaped into British territory after committing offences in the State, the Political Agent may either certify that the case should be prosecuted in British India or surrender the accused to the Banganapalle authorities for trial in that State, subject to certain exceptions. The Banganapalle criminal courts cannot exercise any authority over European British subjects. Except housebreaking and theft, grave crime is not prevalent.

No laws and regulations have been framed by the Nawāb separately for the State. The Indian Penal Code and the Civil and Criminal Procedure Codes of British India are in force, having been adopted by the Nawāb as laws of the State, and other British enactments are similarly adopted as occasion requires.

As regards salt, the Nawāb has undertaken absolutely to prohibit the manufacture of earth-salt in his State on receipt of an annual compensation of Rs. 3,000. No opium is grown, and the Nawāb gets his supply from Madras on licences countersigned by the Political Agent. He has his own arrangements for the administration of the *ābkāri* revenue. The import of spirits manufactured in the State into British territory is prohibited. Toddy may, however, be imported from Banganapalle on payment of one anna per gallon by a fixed route, on which there is a *chaukī* or customs station. Until 1904 the Nawāb controlled his own *gānja* revenue; but he has since agreed to prohibit absolutely *gānja* cultivation, in return for an annual payment of Rs. 3,060 as compensation.

The Nawāb administers his own stamp revenue, adopting the Indian Stamp Act as his model. There are no telegraphs in the State. The State post office was amalgamated with the British postal system on January 1, 1900, when the Nawāb issued a regulation applying the provisions of the Indian Post Office Act to Banganapalle. The only post office is at Banganapalle town.

Ghulām Alī Khān, the sole *jāgīrdār* after 1815, made a settlement in 1820 with a view to prevent future disputes among his relatives, by which he assigned certain villages (called sub-*jāgīrs*) to each of his cousins and other members of the family. These sub-*jāgīrs* were, from the beginning, resumable at will; they were resumed under the Government management of 1835–48, were granted again when the estate was restored, and have recently (1905) been finally resumed by the Madras Government. The sub-*jāgīrdārs* owned twenty-eight villages, and generally enjoyed the land revenue without paying any *peshkash* to the Nawāb.

Very little is known of the land revenue history of the rest of the State. The rates of assessment are not settled, but vary with the will of the Nawāb. To remove the present uncertainties of tenure and land assessment and to place the land revenue administration upon a satisfactory and intelligible basis, the late Nawāb, as already mentioned, recently had the State surveyed by a British survey party and contemplated introducing a revenue settlement.

The total revenue in 1904–5 amounted to Rs. 96,000, of which Rs. 21,700, or nearly one-fourth, was made up of deposits and loans. Of the remainder, land revenue contributed Rs. 24,000; salt, excise, *mohtarfa*, and stamps, Rs. 23,500; Rs. 9,200 was received from

miscellaneous sources, and Rs. 5,000 and Rs. 3,200 from road cess and forests respectively. The total expenditure amounted to 1·2 lakhs, of which Rs. 62,500, or more than one-half, was incurred on account of the Nawāb's household and family. The next considerable item is the establishment, which cost Rs. 23,100, or a little less than one-fifth. About Rs. 12,000 was given by way of pensions in lieu of sub-*jāgīrs*.

The police force consisted in 1904–5 of 5 head constables, 59 constables, and one bugler, assisted by 131 *talaiyāris*. There are five police stations. A jail is maintained at Banganapalle, the local medical officer being *ex-officio* superintendent.

Education is very backward. The State maintains two schools, one of which teaches up to the first and the other up to the fourth standard. In 1904–5 the number of pupils was 120 (all boys), and the cost to the State was Rs. 1,022. Some village schools are maintained in rural tracts, but no statistics are available regarding them.

The State possesses only one hospital, at Banganapalle town. The total number of cases treated in 1904–5 was 13,169; 106 surgical operations were performed, and the expenditure was Rs. 2,535.

The number of children vaccinated in 1904–5 was 763, of which only 621 cases, or 19 per 1,000 of the population, were successful. The results are unsatisfactory when compared with those of the adjoining British territory, where the corresponding figure was 25·6 per 1,000.

Bāngangā.—An old bed of the Ganges in Benares and Ghāzīpur Districts, United Provinces.

Bāngangā ('Arrow-river').—A hill stream rising in the south of Nepāl (27° 42′ N., 83° 6′ E.), which flows for about 18 miles through Bastī District and joins the Būrhī Rāptī ('old' Rāptī) at Kabrahī Ghāt, where the road from Bastī through Bānsī to Nepāl crosses the latter river. Timber from Nepāl is floated down. Traces of the bed of another river of the same name still exist south of the Rāptī and the upper course of the Katnehiā. A tributary of the Kuwānā in Bastī, which formed one branch of this, is still called Bāngangā.

[Cunningham, *Archaeological Survey Reports*, vol. xxii, p. 4.]

Bāngangā (or Utangan).—A river of Northern India, rising in Jaipur territory near Bairāt (27° 24′ N. and 76° 10′ E.). It flows, generally in an easterly direction, through the States of Jaipur, Bharatpur, and Dholpur, and the District of Agra in the United Provinces, and after a course of about 235 miles joins the Jumna 10 miles east of Fatehābād in Agra District.

The word Bāngangā (Vānagangā) means literally 'arrow river.' The story goes that the five Pāndava brothers, on going into hiding at Bairāt (Vairāta), concealed their sacred weapons in a tree, and swore that before using them again they would purify them by washing them

in the Ganges. One of the brothers, Arjun, had occasion to use his weapons against the Kurus. The Ganges being far off, he shot an arrow into the ground, and immediately a spring of the sacred Ganges water issued, which became the source of the Bānganga.

Between 1848 and 1856 small irrigation works were made in Agra District and in Bharatpur State; but these had the effect of diverting the course of the Bānganga, and did so much damage that in 1864 the works in Agra were totally closed, and in 1869 operations were undertaken in Bharatpur to bring back the river to its old course. Near the village of Gopālgarh in the Rāmgarh hills, about 25 miles below the source, the waters of the river are impounded by a dam 80 feet in height to form the Rāmgarh reservoir, the most important irrigation work in the Jaipur State. This lake when full covers an area of six square miles, and can under exceptional circumstances contain 3,000 million cubic feet of water; but ordinarily about half this quantity, or sufficient to irrigate more than 13,000 acres, is impounded. The project is practically complete and has cost nearly five lakhs of rupees. Some smaller works have been carried out in the Bharatpur State. Rāmgarh is said to have once been the capital of the Jaipur State under the name of Māshi; there is a temple in the gorge called Jumwa Devī which is visited by the Mahārājās of Jaipur on their accession to the *gaddi*. Here they are shaved, the process being part of the ceremony connected with the accession.

The stream in the gorge near Rāmgarh is perennial, but lower down the bed dries up except during the rains. The banks are for the most part low, and in Bharatpur are covered, often to a distance of two or three miles from the stream, with a dense growth of jungle grass and tamarisk. In Dholpur territory ravines run inland from either bank, sometimes for a distance of two miles or more. Where it first touches the United Provinces, the Bānganga is a mountain torrent with a bed of sand mixed with gravel. The principal tributaries are the Gambhīr, Kawār or Koela, and Pārvatī on the right bank, and the Khārī on the left. The Bānganga and Khārī often bring down disastrous floods. In Bharatpur the violence of these has given the river the name of Ghora-pachhār or 'overthrower of horses.'

[*Papers relating to the Irrigation of the Agra District from the Utangan River* (Roorkee, 1853–4).]

Bangaon Subdivision.—Western subdivision of Jessore District, Bengal, lying between 22° 52′ and 23° 26′ N. and 88′ 40′ and 89° 2′ E., with an area of 649 square miles. The population in 1901 was 317,352, compared with 330,201 in 1891. It is a land of semi-stagnant rivers, the soil is comparatively poor, and the subdivision is more thinly populated (489 persons to the square mile) than the rest of the District. It contains one town, MAHESPUR (population, 4,180),

and 798 villages, including BANGAON, the head-quarters. The principal marts are at Bangaon and Mahespur.

Bangaon Village.—Head-quarters of the subdivision of the same name in Jessore District, Bengal, situated in 23° 3′ N. and 88° 50′ E. on the Ichāmatī. Population (1901), 3,660. Bangaon is a station on the central section of the Eastern Bengal State Railway, and is also connected with the eastern section of that railway by a branch to Rānāghāt. It contains the usual public offices; the sub-jail has accommodation for 12 prisoners.

Bāngarmau.—Town in the Safīpur *tahsīl* of Unao District, United Provinces, situated in 26° 54′ N. and 80° 13′ E., near the Kalyānī river, and on the road from Unao town to Hardoī. Population (1901), 6,051. About two miles away are a number of ancient mounds called Nawal, which have been identified with the ruins of a place visited by Hiuen Tsiang. Tradition relates that a Saiyid from Kanauj came to Nawal and was inhospitably received, whereupon he cursed the Rājā and his people and the town perished, after which Bāngarmau was founded. The tomb of the saint, whose name was Alā-ud-dīn, bears an inscription dated in 1302, and another tomb was erected in 1374 by Fīroz Shāh Tughlak. Bāngarmau lies at the crossing of two old thoroughfares, the road from Kanauj to Fyzābād and Jaunpur, and the road from Delhi to Benares on the north bank of the Ganges. It is administered under Act XX of 1856, with an income of about Rs. 1,000. There is little trade now, but a market is held twice a week. There is a school with 90 pupils.

Bāniyāchung.—Village in the Habiganj subdivision of Sylhet District, Eastern Bengal and Assam, situated in 24° 31′ N. and 91° 21′ E. It is the largest village in Assam; population (1901), 28,883. It is said to have been founded in the first half of the eighteenth century by Abid Reza, the first of the converted Hindu Rājās of LAUR, who submitted to pay tribute to the Mughals. The village contains a mosque of great local repute, a dispensary, a high school, two bazars, and about two hundred shops. It is surrounded by a moat, and the houses are closely packed together on islets of high land separated from one another by marshy ground and watercourses.

Bānka Subdivision.—Southern subdivision of Bhāgalpur District, Bengal, lying between 24° 33′ and 25° 7′ N. and 86° 19′ and 87° 11′ E., with an area of 1,182 square miles. It is situated on the fringe of the Santāl Parganas, and the country rises from the dead level of the northern alluvial plain by a series of rolling ridges, valleys, and jungle-clad hills. The population in 1901 was 433,499, compared with 423,350 in 1891. It contains 994 villages, one of which, BĀNKA, is its head-quarters; but no town. The subdivision is less densely populated than the remainder of the District, supporting only 367 persons to the

square mile. MANDĀRGIRI hill possesses some archaeological interest, and there are also remains at BAUSI in its neighbourhood.

Bānka Village.—Head-quarters of the subdivision of the same name in Bhāgalpur District, Bengal, situated in 24° 53′ N. and 86° 56′ E., on the Chāndan river. Population (1901), 1,091. It contains the usual public offices; the sub-jail has accommodation for twelve prisoners. *Gur* is made and exported to Lower Bengal.

Bānkā-Pahārī.—A petty *sanad* State in Central India, under the Bundelkhand Agency, belonging to the HASHT-BHAIYA JĀGĪRS, consisting of a single village, with an area of 4 square miles. Population (1901), 1,056. The first portion of its name is said to be derived from the epithet of *bānkā* (literally 'crooked'), applied to a rakish method of wearing the head-dress, and commonly used in the sense of 'spirited' or 'gallant.' The original holder of the *jāgīr* was thus designated, and the epithet has become a family title. The first holder of this estate was Dīwān Umed Singh, a Bundelā Rājput, son of Dīwān Rai Singh of Barāgaon, near Jhānsi. The estate originally consisted of five villages, but four were lost during the Marāthā invasion. The territory was confirmed to Dīwān Bānkā Ishrī Singh by a *sanad* granted in 1823. The present holder is Dīwān Bānkā Mihrbān Singh, who succeeded in 1890. The revenue is Rs. 4,000. The village is situated in 25° 22′ N. and 80° 14′ E.

Bankāpur Tāluka.—Western *tāluka* of Dhārwār District, Bombay, lying between 14° 51′ and 15° 10′ N. and 75° 4′ and 75° 28′ E., with an area of 344 square miles. There is one town, BANKĀPUR (population, 6,360), and 144 villages, including SHIGGAON (5,232), the head-quarters. The population in 1901 was 90,361, compared with 85,602 in 1891. The density, 263 persons per square mile, is above the District average. The demand for land revenue in 1903–4 was 2·09 lakhs, and for cesses Rs. 16,000. In the west the soil is chiefly red, in the south and north chiefly black, and in the east a mixed black and red. The climate is healthy.

Bankāpur Town.—Town in the *tāluka* of the same name in Dhārwār District, Bombay, situated in 14° 55′ N. and 75° 16′ E. Population (1901), 6,360. It has a ruined fort and two temples. A weekly market is held on Tuesdays, when coarse cloth, blankets, oil, and metal vessels are sold. The earliest mention of Bankāpur is in a Kolhāpur Jain manuscript dated 898, where 'the famous city of Bankāpur, the greatest among cities,' is described as having been called after himself by the Chellaketan chief Bankeyārasa, the Dhārwār underlord of the Rāshtrakūta king Amoghavarsha (851–69). In 1071 Udayāditya of the Gangā family was reigning at this city. In 1406 it was besieged by the Bahmani Sultan, Fīroz Shāh, an ancestor of the Nawāb of Savanūr. In 1776 it fell to Haidar Alī. From Marāthā records of 1790 Bankāpur

seems to have been the head-quarters of a *sarkār* of sixteen *parganas*. In 1802 it was ceded to the British by the Peshwā under the Treaty of Bassein. It contains a fine Jain temple of Rangaswāmi, with a number of inscriptions. There are four schools, of which two are for girls.

Bānkībāzār.—Ancient village in the District of the Twenty-four Parganas, Bengal, on the Hooghly river near the modern Paltā, 3 miles above Barrackpore. The name of this village has disappeared from the map, and its site can be identified only from old charts. It formed the principal settlement in India of the ill-fated Ostend Company which was chartered by the Emperor of Austria in 1722. This settlement was regarded with great jealousy by the English, French, and Dutch ; and the result was that, when the Court of Vienna was anxious to obtain the European guarantee for the Pragmatic Sanction in 1727, the Company's charter was suspended. In 1733 the Muhammadan general (*faujdār*) at Hooghly, at the instigation of the Dutch and English, besieged Bānkībāzār ; and the small garrison, after a despairing resistance against overwhelming numbers, abandoned the place and set sail for Europe [1].

Bankipore Subdivision.—Head-quarters subdivision of Patna District, Bengal, lying between 25° 12′ and 25° 40′ N. and 84° 42′ and 85° 17′ E., with an area of 334 square miles. Owing to plague mortality and defective enumeration consequent on the prevalence of that disease at the time of the Census of 1901, the population recorded in that year was only 341,054, compared with 404,304 in 1891, the density being 1,021 persons per square mile. The subdivision is a flat alluvial tract, bounded on the north by the Ganges. It contains two towns, PATNA CITY (population, 134,785) and PHULWĀRI (3,415) ; and 975 villages. Its head-quarters are at BANKIPORE, which is included within the municipal limits of Patna city.

Bankipore Town (*Bānkipur*).—Head-quarters of the Division and District of Patna, Bengal, situated in 25° 37′ N. and 85° 8′ E., on the right bank of the Ganges. It forms part of the Patna municipality, and is the western suburb of that city in which most of the Europeans reside. Their houses and the police lines, judicial courts, and other public buildings extend along the river bank. Bankipore possesses a spacious *maidān* and a race-course. To the south of this lies the railway station, which is 338 miles from Calcutta and is the junction for the Patna-Gayā line and also for the Dīgha Ghāt branch line connecting the East Indian with the Bengal and North-Western Railway. At once the most prominent and the most curious building in Bankipore is the old Government *golā* or granary, a brick building in the shape of a bee-hive, with two winding staircases on the outside, which have been ascended on horse-

[1] The 'Ostenders' were again expelled from Bānkībāzār in 1744 (*Bengal Public Consultations*, October 14, 1744).

back; it was erected by Warren Hastings shortly after the great famine of 1769–70 as a storehouse for grain. This storehouse has never been filled, though during the scarcity of 1874 a good deal of grain was temporarily stored here. In times of famine, proposals to fill it are still made by the native press; but the loss from damp, rats, and insects renders such a scheme of storing grain wasteful and impracticable. The jail, which is situated near the railway station, has accommodation for 453 prisoners, who are chiefly employed in the preparation of mustard oil, carpets, and road-metal. The Bihār National college, founded in 1883, teaches up to the B.A. standard, and the Bankipore female high school, founded in 1867, teaches up to the Entrance standard of the Calcutta University.

Bānkot (or Fort Victoria).—Village and old fort in the Dāpoli *tāluka* of Ratnāgiri District, Bombay, situated in 17° 59′ N. and 73° 3′ E., at the mouth of the Sāvitri river, 73 miles south-east from Bombay. Population (1901), 276. In the beginning of the eighteenth century 'Bancoote' was a pirate nest of the Marāthā chief Angriā. It was ceded by the Marāthās in exchange for the conquered fortress of Gheria in 1756, and thus became the first British possession on the mainland of Western India. It was renamed Fort Victoria, and was highly valued as supplying Bombay with provisions, and also as affording the inhabitants a change of air and scene. James Forbes (*Oriental Memoirs*) visited it in 1771. Bānkot lies at the foot of a rocky headland in the extreme north of the District. The river is navigable by vessels of 16 feet draught 18 miles to Mahāpral, and by vessels drawing 7 feet 10 miles farther to Mahād in Kolāba District. Until 1822 Bānkot was the chief town of Ratnāgiri District. It is now little more than a large fishing village with no manufactures. Coasting steamers call daily during the fair season, but the port is closed in the south-west monsoon. The value of the imports and exports is trifling. Bānkot contains 7 schools, attended by 100 boys and 22 girls.

Bānkurā District.—District in the Burdwān Division of Bengal, lying between 22° 38′ and 23° 38′ N. and 86° 36′ and 87° 46′ E., with an area of 2,621 square miles. The Dāmodar river on the north separates it from Burdwān; while it is bounded on the south by Midnapore, on the east by Burdwān and Hooghly, and on the west by Mānbhūm.

Physical aspects.

The District forms part of the eastern fringe of the Chotā Nāgpur plateau. In the north and west it consists of broken rocky country with isolated spurs, of which the highest are the SUSUNIA hill (1,442 feet) and Bihāri Nath. To the east the elevation is lower; the country has an undulating park-like aspect, and eventually merges in the alluvial plains of the Gangetic delta.

The chief rivers are the Dāmodar, which forms the northern

boundary, and the Dwārkeswar or Dhalkisor, which traverses the centre of the District. They are insignificant streams during the hot season, but in the rains become navigable by boats of 50 to 60 tons burden. During this season they sometimes rise so suddenly, owing to the rapid drainage from the neighbouring hills, that a head wave is formed, called the *hurpā bān*, not unlike the bore or tidal wave in the Hooghly, which often causes loss of life and great destruction of property. The Silai and Kāsai cross the south of the District.

Gneiss appears in the western hills, especially in the neighbourhood of Bānkurā town; and in the north-west metamorphic rocks stand up boldly in well-marked hornblendic ridges, the general strike of which is nearly east and west. South of Bānkurā town veins of granite occur, especially in the metamorphic rocks along the Silai river, cutting through the gneissic rocks. The Gondwāna system is represented in the north, on the banks of the Dāmodar river, by beds which belong to the Rānīganj group and may contain useful seams of coal. Elsewhere the surface consists of gently undulating ground, covered by laterite and alluvium. The former is invariably detrital, and contains such quantities of quartz pebbles as to resemble a coarse ferruginous conglomerate. The laterite is extensively overlaid by a sandy clay, which is often intermixed with *kankar*[1].

The uplands are bare or clothed with a scrub jungle of *Zizyphus* and other thorny shrubs, which sometimes gives way to *sāl* (*Shorea robusta*) forest, while the low hills are covered by a dense mixed forest, which contains species of *Miliusa*, *Schrebera*, *Schleichera*, and *Diospyros*. In the low-lying land to the east, the swamp vegetation of the West Bengal rice plain is found. In the neighbourhood of villages are thickets, in which the most common species are bamboos, *pīpal* (*Ficus religiosa*), banyan (*Ficus indica*), red cotton-tree (*Bombax malabaricum*), *Mangifera*, *Moringa*, and *Odina Wodier*. The District contains no Government forests.

Black bears are common in the western jungles; and hyenas, leopards, wolves, deer, and wild hog are also occasionally found. Pythons are often met with in the hills, while the cobra, *karait*, and other deadly snakes are common.

Exceptionally high day temperatures are a feature of the hot months, the mean maximum rising to 93° in March and 102° in April. The mean temperature for the year is 80°. The annual rainfall averages 56 inches, of which 10·4 inches fall in June, 12·7 in July, 12·4 in August, and 8·2 in September.

[1] *Memoirs, Geological Survey of India*, vol. i, pt. iii, 'The Geological Structure and Physical Features of the Districts of Bānkurā, Midnapore, and Orissa'; also vol. iii, pt. i, 'The Raniganj Coalfield,' by W. T. Blanford. This section was supplied by Mr. P. N. Bose, of the Geological Survey of India.

In prehistoric times Bānkurā formed part of the old kingdom of Karna Suvarna, and subsequently of the Rārh division of Bengal. The local legends centre round Bishnupur. Here was founded, in the beginning of the eighth century A.D., one of the eight petty dynasties of Hindu rulers who formerly held the Bengal frontier against the jungle tribes of the western plateau. Under Muhammadan rule the Bishnupur family appears sometimes as the enemy, sometimes as the ally, and sometimes as the tributary of the Musalmān Nawāb. In the rent-roll of Todar Mal in 1582 the country held by the family was assessed at a fixed tribute. In 1715, under the administration of Jafar Khān, it was reduced to the status of a *zamīndāri*. It was at that time included within the *chakla* of Burdwān, and was with that District ceded to the East India Company in 1760. From that date the fortunes of the family rapidly declined. They were impoverished by Marāthā raids, and the famine of 1770 left few inhabitants to till the soil. Meanwhile the British Government added to their public burdens and treated them as mere land stewards, and thus completed their ruin. The present representative of the family is dependent for his subsistence on a few *debottar* estates. When the Bishnupur *zamīndāri* first passed into the hands of the British, it was administered from Murshidābād; but its lawless condition soon necessitated a more direct administration, and in 1787 it was constituted, with Bīrbhūm, into a separate District. In 1793 it was separated from Bīrbhūm and added to Burdwān; but in 1805 it was incorporated with the newly constituted JUNGLE MAHĀLS, of which it continued to form part until 1833. Bānkurā was created a separate revenue District in 1835; but discrepancies long existed between the revenue, judicial, and police jurisdictions, which were not completely removed until 1879. Interesting archaeological remains are found at BISHNUPUR.

History.

The population of the present District area increased steadily from 968,597 in 1872 to 1,041,752 in 1881, to 1,069,668 in 1891, and to 1,116,411 in 1901. The undulating uplands are well drained and form one of the most salubrious tracts in Bengal. The Bishnupur subdivision is less healthy, and here the notorious Burdwān fever formerly caused great ravages. Mortality is chiefly due to fever. Cholera is always present in a sporadic form and sometimes becomes epidemic. Leprosy is more prevalent than in any other part of India, and more than 3 males per 1,000 were recorded as suffering from it in 1901. The principal statistics of the Census of 1901 are shown in the table on the next page.

Population.

The District is less densely peopled than any other in the Burdwān Division. The population is very sparse in the south and west, where the land is undulating, rocky, and barren; farther east, in the Bishnupur subdivision, the soil is alluvial and the density is much greater. The

increase of population at the last Census is less than half what it would have been but for the large emigration which takes place. The emigrants are for the most part hardy aborigines from the south and west of the District, who are attracted by the high wages paid in the coal-fields of Asansol and in the Assam tea gardens, or who supplement their scanty harvests by working as labourers in the metropolitan Districts in the off-season. The three towns are BĀNKURĀ, the head-quarters, BISHNUPUR, and SONĀMUKHI. The vernacular of the District is the dialect known as Rārhi *boli* or Western Bengali, but Santālī is spoken by nearly 9 per cent. of the population. By religion 975,746 are Hindus, 51,114 Musalmāns, and 89,157 Animists. The last mentioned are chiefly Santāls of the head-quarters subdivision, who number altogether 106,000.

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Bānkurā . .	1,921	1	4,069	712,055	371	+ 2·85	57,926
Bishnupur .	700	2	1,523	404,356	578	+ 7·17	45,753
District total	2,621	3	5,592	1,116,411	426	+ 4·37	103,679

The Musalmāns are almost all Shaikhs (44,000). Among Hindus the semi-aboriginal castes of Bauri (113,000) and Bāgdi (91,000) are largely represented, the former predominating in the west and the latter towards the east of the District. Brāhmans (93,000) and Telis (74,000) are also numerous. Of the total population, 60·7 per cent. are supported by agriculture, 15·9 per cent. by industries, 0·7 by commerce, and 2·2 by the professions. The proportion of agriculturists is considerably below the general average for Bengal.

Christians number 363. A Wesleyan mission, which commenced work in 1877, maintains several schools. It has opened classes in Bānkurā town to teach carpentry, weaving, and basket-making, and also built a public library in 1899 and a leper asylum with accommodation for 72 inmates in 1902. An Armenian mission possesses an orphanage near Mejia.

Agriculture.

The alluvial soil in the east of the Bishnupur subdivision is fertile; elsewhere valleys are generally rich and productive, while the higher lands are comparatively barren, and are for the most part covered with jungle.

The chief agricultural statistics for 1903–4 are shown in the table on the next page, in square miles.

The chief crop is rice, covering 535 square miles. By far the most important harvest is the *āman* or winter rice, which is sown in April

or May, after three or four ploughings, transplanted in July or August, and reaped in December. The *aus* or early rice is sown broadcast in May and reaped in September. Sugar-cane covers 20 square miles; maize is cultivated on the higher lands, and oilseeds, pulses, wheat, flax, and cotton are also grown. Indigo, formerly an important crop, has now almost disappeared. Rich black mud, scraped from the bottom of tanks or reservoirs, is used as manure mixed with ashes and stubble, while for the more valuable crops cow-dung is added. In the case of lands growing sugar-cane and other exhausting staples, rotation is observed, sugar-cane being generally followed by *til* (*Sesamum indicum*), after which a crop of early rice is taken, followed by mustard and peas mixed.

Subdivision.	Total.	Cultivated.	Cultivable waste.
Bānkurā . . .	1,921	451	865
Bishnupur . . .	700	195	433
Total	2,621	646	1,298

NOTE.—It is estimated that 51 square miles are twice cropped.

The cultivated area is being gradually extended. During the last decade Rs. 62,000 was advanced under the Land Improvement and Agriculturists' Loans Acts for the excavation and re-excavation of irrigation tanks and other miscellaneous improvements.

The local cattle are weak and poor, though the pasturage is ample except in the east of the District.

Irrigation is necessary everywhere except in the low country to the east, and it is estimated that one-third of the cultivated area is artificially irrigated. The usual method is to throw a dam across a watercourse, but wells and tanks are also utilized.

There are two small coal-mines in the north of the District, the output in 1903–4 being 10,634 tons. Ferruginous laterite is common, and the quartz, sandstone, trap, gravel, and clay which it produces are largely utilized for road-making and brick-burning. Building stone exists in unlimited quantities in the hills. A white lithomarge is obtained under the laterite at a point about 12 miles north-east of Bānkurā town. Gold occurs in small quantities in the sands of the Dhalkisor and Kāsai rivers.

Trade and communications.

Silk-spinning, silk and cotton-weaving, the manufacture of brass and bell-metal ware, and the preparation of shellac are the principal industries. Bishnupur town contains a large weaving population, and is noted for its prettily embroidered scarves and fine silk cloth. *Tasar* silk is manufactured at Bānkurā town, Bishnupur, and Bīrsinghpur, and coarse cotton cloths at Bānkurā town, Gopīnāthpur, Barjorā, Rājgrām, and

Bīrsinghpur, though they are being ousted from the market by cheap Manchester goods. Sonāmukhī is the centre of the shellac industry, but profits have been reduced by a fall in prices; about 5,000 maunds were sent to Calcutta in 1903-4. Other industries are the manufacture of gold and silver ornaments, iron implements, shell bangles, and lac beads.

Rice, brass and bell-metal ware, silk stuffs, and hides are the chief articles of export, while the imports are tobacco, salt, spices, betel-nuts, poppy-heads, cotton and cotton twist, and European piece-goods. A small part of the trade passes through the Rānīganj and Pānāgarh stations of the East Indian Railway, but most of it is conveyed by the Midnapore-Jherriā extension of the Bengal-Nāgpur Railway, which passes through the District. There is some bullock-cart traffic with Ghātāl in Midnapore District.

The East Indian Railway skirts the north-east boundary. The Midnapore-Jherriā extension of the Bengal-Nāgpur Railway, which passes through the District, has recently been opened, and a chord-line from Howrah to Bānkurā is under construction. The chief roads are the Rānīganj-Midnapore road maintained from Provincial funds, the old military grand trunk road which runs across the District, the Bānkurā-Burdwān road via Sonāmukhī, the Bānkurā-Raipur road, and the Bishnupur-Pānāgarh road. These are maintained by the District board, which has altogether under its charge 24 miles of metalled and 575 miles of unmetalled roads, in addition to 105 miles of village tracks.

River-borne traffic is practically confined to the floating of long rafts (locally called *murs*) down the Dāmodar; the trade is declining, owing to the supply of timber near the river having been practically exhausted.

Famine

The District is subject to drought and required Government relief in 1866 and 1874, and again in 1897. On the last occasion a daily average of 2,377 persons were employed on relief works, and 6,528 were gratuitously relieved from May to September at a cost of Rs. 1,20,000, of which Rs. 35,000 was contributed by the District board, while the balance was met by Government.

Administration.

For administrative purposes the District is divided into two subdivisions, with head-quarters at BĀNKURĀ and BISHNUPUR. The District Magistrate has at Bānkurā a staff of three Deputy-Magistrate Collectors, while a fourth, assisted by a Sub-Deputy-Collector, is in charge of the Bishnupur subdivision.

For civil judicial work there are, subordinate to the District and Sessions Judge, a Sub-Judge and three Munsifs at Bānkurā, one Munsif at Khātra, one at Kotālpur, and two at Bishnupur, one of

whom occasionally sits at Kotālpur. For many years past the District has been notorious as a centre of gangs of professional dacoits, one of which has been traced back as far as the Mutiny of 1857. These gangs, which mainly commit their crimes in the neighbouring Districts, are now being broken up.

Nearly the whole of the District, as at present constituted, was originally comprised in the Bishnupur *pargana*, which formed the estate of the Rājā. This was gradually broken up, owing to his unpunctuality in paying the land revenue; but in 1835–6, when Bānkurā was first constituted a separate Collectorate, it still contained only 56 estates. The number had by 1903–4 increased to 1,046, with a current demand of 4·74 lakhs. Of these, 983, paying a revenue of 4·73 lakhs, are permanently settled; 51 are temporarily settled estates, consisting of the surplus side lands of the Rānīganj-Midnapore road; and 12 petty estates are the property of Government. The incidence of the land revenue is lower than elsewhere in the Division, being only R. 0–12–4 per cultivated acre. Tenures peculiar to the District are: *nāyābādi*, under which a tenant who takes up waste land is allowed to hold a certain portion of it free of rent or to obtain a deduction from the rent of the entire tenure; *jalsāsan*, an improvement lease under which a tenant constructs tanks or reservoirs on similar terms; and *itmāmdāri*, under which the tenure-holder enjoys the land rent-free as remuneration for performing the duties of a rent-collector. *Ghātwāli* estates were formerly held for services rendered in defending the *ghāts* or frontier passes against the inroads of Marāthās and other plunderers. A quit-rent was originally payable to the Rājā of Bishnupur, and was included in the 'assets' of the Decennial Settlement, but on the Rājā's application these lands were subsequently resumed by Government. The *ghātwāls* have now been abolished and their estates settled. The maximum, minimum, and average rates per acre assessed on the *ghātwāli* lands were Rs. 7–8, Rs. 3–12, and Rs. 5–10 for low lands, and Rs. 12, Rs. 3, and Rs. 7–8 for high lands. Throughout the District generally, the average holding of a tenant is 6 acres. Rents rule higher in the east than in the west of the District, rice land bringing in from Rs. 3–12 to Rs. 6 an acre in the west, and from Rs. 4–8 to Rs. 7–8 in the Bishnupur subdivision. For *rabi* land the rates vary between Rs. 5–4 and Rs. 12 per acre, though as little as Rs. 3 per acre is paid for the less fertile lands in the north-west.

The collections of land revenue and of total revenue (principal heads only), in thousands of rupees, are shown in the following table:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	4,59	4,58	4,60	4,79
Total revenue . .	7,16	8,11	9,45	10,02

Outside the municipalities of BĀNKURĀ, BISHNUPUR, and SONĀMUKHĪ, local affairs are managed by the District board and the two subdivisional local boards subordinate to it. The income of the board in 1903–4 was Rs. 1,31,000, of which Rs. 52,500 was derived from rates; and the expenditure was Rs. 1,16,000, half of which was spent on public works and Rs. 40,000 on education.

The District contains 13 police stations and 9 outposts. The force subordinate to the District Superintendent in 1903 consisted of 2 inspectors, 27 sub-inspectors, 25 head constables, and 321 constables. There was in addition a village police consisting of 250 *daffadārs* and 2,931 *chaukīdārs*, of whom 401 are remunerated by service tenures. The cost of maintenance of the regular force was Rs. 77,000, and there was one policeman to every 10·1 square miles and to every 4,327 persons. The District jail at Bānkurā has accommodation for 309 prisoners, and a subsidiary jail at Bishnupur for 15.

Education is making steady progress, and 9·3 per cent. of the population (18·3 males and 0·5 females) were literate in 1901. The total number of pupils under instruction increased from 38,512 in 1892–3 to 39,092 in 1900–1. In 1903–4 37,695 boys and 4,708 girls were at school, being respectively 45·7 and 5·5 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,388, including one Arts college, 65 secondary, 1,241 primary, and 81 special schools. The last-mentioned institutions include two Santāl schools under mission management, and two aided music schools at Bānkurā and Bishnupur, at which both vocal and instrumental music are taught. The total expenditure on education was Rs. 1,84,000, of which Rs. 22,000 was met from Provincial funds, Rs. 38,000 from District funds, Rs. 2,000 from municipal funds, and Rs. 84,000 from fees.

In 1903 the District contained 10 dispensaries, of which 3 had accommodation for 34 in-patients. The cases of 38,000 out-patients and 318 in-patients were treated, and 2,890 operations were performed. The expenditure was Rs. 11,000, of which Rs. 2,000 was met from Government contributions, Rs. 4,000 from Local and Rs. 3,000 from municipal funds, and Rs. 2,000 from subscriptions. A leper asylum is maintained at Bānkurā town.

Vaccination is compulsory only within municipal areas; it appears to be gaining ground, though the number of operations varies widely from year to year. In 1903–4 the number of persons successfully vaccinated was 38,450, representing 36 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. iv (1876); and *Annals of Rural Bengal* (1868).]

Bānkurā Subdivision.—Western subdivision of Bānkurā District, Bengal, lying between 22° 38′ and 23° 38′ N. and 86° 36′ and

87° 25′ E., with an area of 1,921 square miles. The subdivision is composed of undulating country, covered in places with low scrubby jungle and coppice wood. To the east it merges in the alluvial plain, but to the west the surface is more irregular, the undulations become more marked, and numerous isolated hills appear. The population in 1901 was 712,055, compared with 692,357 in 1891. It contains one town, BĀNKURĀ (population, 20,737), its head-quarters; and 4,069 villages. The subdivision, which lies on the fringe of the Chotā Nāgpur plateau, is much less fertile and less densely populated than the Bishnupur subdivision, and supports only 371 persons to the square mile.

Bānkurā Town.—Head-quarters of Bānkurā District, Bengal, situated in 23° 14′ N. and 87° 4′ E., on the north bank of the Dhalkisor river. The population in 1901 was 20,737, of whom 19,553 were Hindus, 993 Muhammadans, and 158 Christians. Bānkurā is said to be named after an early settler named Banku Rai, whose descendants still reside in the town. The climate is dry and very healthy. The town lies on the grand trunk road from Calcutta to the north-west. The newly-constructed Midnapore-Jherriā branch of the Bengal-Nāgpur Railway passes through it, and a direct line from Howrah is contemplated. *Tasar* silk is largely manufactured. Considerable trade is carried on, the chief exports being rice, oilseeds, lac, cotton and silk cloth, silk cocoons, &c., and the imports English piece-goods, salt, tobacco, spices, coco-nuts, and pulses. Bānkurā was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 13,000, and the expenditure Rs. 12,000. In 1903–4 the income was Rs. 20,000, a third of which was derived from a tax on persons (or property tax); and the expenditure was Rs. 14,000. The town contains the usual public offices. The District jail has accommodation for 309 prisoners, the chief industries being mustard-oil pressing, brick-making, *darī* and cloth-weaving, and cane and bamboo work. A leper asylum built in 1902 is administered by the Wesleyan Mission; it has accommodation for 72 inmates.

Banmauk.—North-western subdivision and township of Kathā District, Upper Burma, lying between 24° 10′ and 24° 59′ N. and 95° 15′ and 95° 59′ E., with an area of 1,235 square miles. It was formerly part of the Wuntho State and was annexed in 1891. The population in 1901 was 28,360, distributed in 338 villages. The head-quarters are at Banmauk (population, 389), near the south-eastern corner. The township is hilly throughout, especially in the north, in the old Mansi township. Near Mansi may still be seen the stockades constructed by the Wuntho Sawbwa during his rebellion. The principal occupations of the inhabitants are rice and tea cultivation. The cultivated area under supplementary survey in 1903–4 was 23 square miles, and the land revenue and *thathameda* amounted to Rs. 82,500.

Bannu District.—One of the four trans-Indus Districts of the North-West Frontier Province, lying between 32° 16′ and 33° 5′ N. and 70° 23′ and 71° 16′ E., with an area of 1,670 square miles. The District forms a basin drained by two rivers from the hills of Wazīristān, the Kurram and the Gambīla or Tochi, which unite at Lakki and flow into the Indus south of Kālābāgh. It is shut in on every side by mountains: on the north by those in the Teri *tahsīl* of Kohāt District; on the east by the southern extremity of the Maidāni Pahār or Khattak Niāzi range and the northern spur of the Marwat range, which separate the District from the Isa Khel *tahsīl* of Miānwāli District in the Punjab; on the south-east and south the Marwat and Bhittanni ranges divide it from Dera Ismail Khān; and on the west and north-west lie Wazīristān and independent territory inhabited by the Bhittanni tribe. These hills nowhere attain any great height. The highest point of the Maidāni range at its centre, near the hamlet and valley of Maidān, has an altitude of only 4,256 feet. The Marwat range culminates in Sheikh Budīn, the hill which rises abruptly from its south-west end to a height of 4,516 feet, and forms the summer retreat for this District and Dera Ismail Khān. From these ranges numerous spurs jut out into the Bannu plains, but no other hills break their level expanse. Of the rivers the larger is the Kurram, which, entering the District at its north-western corner close to Bannu town, runs at first south-east, then south, and finally winds eastward through the Darra Tang or 'narrow gorge' which lies between the extremities of the Maidāni Pahār and Marwat ranges. The Tochi river enters the District about 6 miles south of the Kurram and flows in the same direction, gradually drawing closer to it until their streams unite about 6 or 7 miles west of the Darra Tang. Between these rivers, and on the left bank of the Kurram in the upper portion of its course, lie the only tracts which are perennially irrigated. For the first 10 miles of its passage through the District the Kurram runs between banks of stiff clay which rise abruptly to a height of 10 to 30 feet, and its bed is full of stones and boulders; but lower down it spreads over long stretches of marsh land. Its flow is rapid, but it is highly charged with a rich silt which renders it most valuable for irrigation.

Physical aspects.

At the south-east edge the western flanks of the hills bounding Miānwāli and Dera Ismail Khān Districts expose Tertiary lower Siwālik soft sandstone and upper Siwālik conglomerates, a thickness of which dips regularly under the alluvium and gravels forming the greater part of the great Bannu plain. On its western side the border area has been examined along one line of route only, namely, the Tochi valley[1].

[1] F. H. Smith, 'Geology of the Tochi Valley,' *Records, Geological Survey of India*, vol. xxviii, pt. ii.

Here long ridges striking north and south expose upper and lower Siwāliks, Nummulitic limestone, sandstone and shales, some mesozoic limestone in the ridge east of Mirām Shāh, and a great mass of Tertiary igneous rocks (diorites, gabbros, and serpentines) west of Muhammad Khel.

In the irrigated portions of the District trees abound of the same species as are common in Peshāwar; elsewhere there is little but thorny shrubs of the same kinds as are found in Kohāt. The more common plants are *Reptonia buxifolia*, *Dodonaea viscosa*, *Capparis aphylla*, *Flacourtia sapida*, *F. sepiaria*, several species of *Grewia*, *Zizyphus nummularia*, *Acacia Jacquemontii*, *Alhagi camelorum*, *Crotalaria Burhia*, *Prosopis spicigera*, several species of *Tamarix*, *Nerium odorum*, *Rhazya stricta*, *Calotropis procera*, *Periploca aphylla*, *Tecoma undulata*, *Lycium europaeum*, *Withania coagulans*, *W. somnifera*, *Nannorhops Ritchieana*, *Fagonia*, *Tribulus*, *Peganum Harmala*, *Calligonum polygonoides*, *Polygonum aviculare*, *P. plebejum*, *Rumex vesicarius*, *Chrozophora plicata*, and species of *Aristida*, *Anthistiria*, *Cenchrus*, and *Pennisetum*.

Bears occasionally come from Wazīristān and leopards still frequent the hills, while hyenas are sometimes found where there are ravines. Wolves are common, rewards having been paid for destroying 168 from 1900 to 1904. The Sulaimāni *mārkhor* is found on all the higher hills, including Sheikh Budīn. *Uriāl* are also to be found on the hills, and 'ravine deer' (gazelle) in the neighbourhood of Jāni Khel.

The general elevation of the plains is about 1,000 feet, and the temperature would be much the same all over the District did not special local causes affect it. Trees, excessive irrigation round the town, and the closeness of the hills combine to make Bannu moist and close in the hot season, and to equalize the temperature throughout the twenty-four hours. The sandy plain of Marwat is hotter by day and cooler by night, and far more healthy in spite of the intense heat. Fevers are common from September to November, and respiratory diseases cause considerable mortality.

The annual rainfall averages 12½ inches, rarely rising above 16, but at Bannu in 1891–2 less than 5 inches fell in the year. The fall is frequently unseasonable.

History.

The population of Bannu is, and has been for many centuries, essentially Afghān. There are, however, remains which tell of an older Hindu population, and afford proof that the District came within the pale of the ancient Graeco-Bactrian civilization of the Punjab. The close of the era of prosperity indicated by these remains is attributed in local tradition to the ravages of Mahmūd of Ghazni, who is said to have utterly demolished the ancient Hindu strongholds, leaving no stone standing upon another. For upwards of a century the country appears to have lain waste, till at length the

Bannu valley was gradually colonized by immigrants from the western hills, the Bannuwāls or Bannūchis, who still remain, and the Niāzai, who subsequently gave place to the Marwats. The advent of the Marwats is placed in the reign of Akbar. The Niāzai, whom they expelled, spread across the Khattak-Niāzai hills, and colonized the plains upon both banks of the Indus. The Marwats still hold the southern portion of the Bannu valley.

At this time, and for two centuries later, the country paid a nominal allegiance to the Delhi emperors. In 1738 it was conquered by Nādir Shah, who laid it completely waste. Ahmad Shāh Durrāni subsequently led his army three or four times through the Bannu valley, levying what he could by way of tribute on each occasion. So stubborn, however, was the opposition of the inhabitants, that neither conqueror made any attempt to establish a permanent government. In 1818 the Nawāb of Mankerā annexed Marwat, but was speedily forced to give way to Ranjīt Singh, who first crossed the Indus in 1823. From that year to 1836 the Sikh troops and those of the Nawāb in turn harried the country. In 1838 the valley passed by cession to the Sikhs. Ranjīt Singh lost no time in attempting to occupy his new territory. Elsewhere in the District he had met with little opposition; but in the Bannu valley he was forced, after several efforts, to fall back upon the expedient of his predecessors, and to content himself with the periodical dispatch of a force to levy what he was pleased to term arrears of revenue: in reality to devastate the country, and carry off whatever booty could be secured.

Such was the state of affairs when, after the first Sikh War, the District first came under British influence. In the winter months of 1847–8, Lieutenant (afterwards Sir Herbert) Edwardes was dispatched to the frontier as the representative of the Lahore Darbār, and accompanied by a Sikh army under General Van Cortlandt. Arrived in Bannu, he found a large portion of the District practically independent. In the Bannu valley every village was a fort, and frequently at war with its neighbours, while the Wazīr tribes on the frontier were ever seeking opportunities for aggression. Within a few months Edwardes reduced the country to order, effecting a peaceful revolution by the force of his personal character, and without the firing of a single shot. The forts were levelled; arrangements were made for the collection of a regular revenue; and so effectual were his measures that on the outbreak at Multān he was able to hurry to the scene of action with a force of levies from this District, who served loyally throughout the campaign. The Sikhs in garrison at Edwardesābād meanwhile rose against their officers, and, having murdered them, marched to join their brethren in arms. A force from the hills at the same time invaded the District, but was held at bay by Lieutenant Reynell Taylor, Edwardes's successor. In

the following year the Punjab was annexed, and the District passed without a blow under British administration. The area covered by the present District at first belonged to Dera Ismail Khān. In 1861 the District of Bannu was constituted, comprising the present District and the Miānwāli and Isa Khel *tahsīls* of what is now the Miānwāli District of the Punjab, which were taken away on the creation of the Frontier Province in 1901. The even tenor of administration has been at times disturbed by frontier raids, but no trouble has at any period been given by the inhabitants of the District itself. During the Mutiny of 1857 the country remained perfectly quiet. The border is guarded by a chain of outposts, eleven in number.

At Akra and other places in the Bannu valley mounds of various sizes exist where, amid fragments of burnt brick and tiles, of broken images and Hindu ornaments, coins occur with Greek or pseudo-Greek inscriptions. The Akra mound near Bannu presents features of great antiquarian interest. This mound, which at its highest point does not rise more than 70 feet above the surrounding plain, has long been excavated by the inhabitants of the neighbouring villages, who find the soil of its 'culture stratum,' generally about 2 to 3 feet in thickness and composed of ashes, rubbish, and bones, to be possessed of valuable properties as manure. Above this 'culture stratum' are layers of earth lighter in colour, and ranging from 8 to 20 feet in thickness. These probably represent the débris accumulated during centuries from structures of clay or sun-dried brick. In these layers are found plentiful fragments of ancient pottery and hard bricks, as well as rubble. The coins, terra-cotta figures, and fragments of small sculptures representing Hindu deities, which have been unearthed from this mound, point to the period from the first century B.C. down almost to the advent of the Muhammadan conquerors as that in which the site was inhabited. There is a curious resemblance in character and contents between the layers composing the Akra mound and the 'culture strata' of the ancient capital of Khotan in Chinese Turkestān.

Population.

Bannu District contains 2 towns and 362 villages. The population at the last three enumerations was: (1881) 182,740, (1891) 204,469, and (1901) 226,776. It increased by 10·9 per cent. during the last decade, the increase being greater in the Marwat *tahsīl* than in that of Bannu. It is divided into two *tahsīls*, of which the head-quarters are at the municipalities of BANNU, the head-quarters of the District, and LAKKI. Statistics according to the Census of 1901 are shown in the table on the next page.

Muhammadans number 201,720, or more than 89 per cent. of the total; Hindus, 22,178; and Sikhs, 2,673. Pashtū is the language of the District, but Hindkī is also spoken among the non-Pathān element. About 129,000 persons, or 56 per cent. of the population,

are Pathāns. Of these, the most numerous group is that of the Marwats (52,000), who live mainly in the *tahsīl* named after them. In person, they are tall and muscular; in bearing, frank and open. Almost every officer who has administered the District has left on record a favourable mention of them. To these the Bannūchis (30,000) form a painful contrast. They are indubitably of mixed descent, and exhibit every Afghān vice, without possessing the compensating virtues of bravery and self-confidence. They are generally small in stature and inferior in physique, sallow and wizened in appearance, and in disposition mean and revengeful. They are, on the other hand, industrious cultivators, and have been uniformly quiet and submissive subjects to the British Government. The Wazīrs in this District, all Darwesh Khel, number 24,000. They are divided into two great sections, the Utmanzai and the Ahmadzai. Last come the Bhittannis (2,000), who live on the border of the District on the southern slopes of the Gabar mountain. In the District itself they are recent settlers. Besides the Pathān races, the chief of the Hindkis, as they are called, are the Jats (15,000) and Awāns (9,000), all of whom live by agriculture, as do also the Bāghbāns (2,000) and Rājpūts (3,000). Saiyids number 12,000. The Aroras, the only important commercial and money-lending class, number 15,000; other castes of this class are the Bhātias and Khattrīs, numbering 2,000 and 1,000 respectively. Of the artisan classes, the Tarkhāns (carpenters, 5,000), Lohārs (blacksmiths, 4,000), Rangrez (dyers, 3,000), Kumhārs (potters, 3,000), Sonārs (goldsmiths, 2,000), and Mochīs (shoemakers and leather-workers, 2,000) are the most important; and of the menials only the Nais (barbers, 3,000) and Chūhrās and Kutānas (sweepers, 2,000) appear in some strength. Agriculture supports 75 per cent. of the population.

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Bannu	443	1	217	130,444	294	+ 8.4	5,557
Marwat	1,198	1	145	96,332	80	+ 14.5	3,980
Total	1,641*	2	362	226,776	138	+ 10.9	9,537

* The difference between this figure and that given on p. 392 is due to the exclusion here of the non-revenue-paying portion of the administrative District.

The Church Missionary Society began work in Bannu in 1864, and has a hospital which possesses a wide reputation on both sides of the frontier. The District contained 63 native Christians in 1901.

The prevailing soil is a sandy gravel, sometimes degenerating into mere sand, as in the Marwat *tahsīl*, and sometimes affording a light and easy cultivation. The central portion of the Bannu valley, between the Kurram and the Tochi, is highly irrigated, and the demands on the soil are incessant. It is preserved, however, from exhaustion by the use of manure and the deposits of silt brought down by the Kurram river. Their fertility being thus renewed, the lands of a great majority of villages are sown year after year, for two harvests, without showing signs of deterioration. The rest of the District, with the exception of the tract between the Bhittanni hills and the Tochi, is sandy and entirely dependent on the rainfall. Saline efflorescence is common in parts of the District. The spring crop, which in 1903–4 occupied 80 per cent. of the area matured in the year, is sown chiefly from the beginning of October to the end of January; the autumn crop from May to July, though sugar-cane is planted as early as March.

Agriculture.

The village tenures of this District as a rule present few peculiar features, and fall naturally under the standard communal types recognized throughout the Province. An exception, however, exists in the custom, once general and still surviving in a few Marwat villages, of the periodical redistribution of holdings among the shareholders. This custom is called *khulla vesh*, literally 'mouth division,' and received official sanction at the last revenue settlement. Cultivation is chiefly carried on by peasant proprietors, and money-rents between tenant and landlord are rare. There are no large proprietors, and the land is minutely subdivided. The following table shows the main agricultural statistics in 1903–4, according to the revenue returns, areas being in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Bannu . . .	443	277	175	54
Marwat. . .	1,198	534	67	268
Total	1,641	811	242	322

Wheat is by far the most important crop, covering 334 square miles in 1903–4, or 49 per cent. of the net cultivated area. Next in importance is gram (158), after which the areas occupied by individual crops diminish rapidly, but maize (52) and *bājra* (41) may be mentioned. Sugar-cane, cotton, and rice are grown to a small extent.

The area cultivated in 1903–4 had risen by 43 per cent. above that cultivated at the settlement of 1872–9, the increase being chiefly due to the more peaceful state of the District. Little has been done as yet in the way of improving the quality of the crops grown. The amount

of advances outstanding under the Land Improvement Loans Act at the end of 1903–4 was Rs. 14,267, while that of advances under the Agriculturists' Loans Act was Rs. 15,483. The amounts advanced in 1903–4 under these two Acts were Rs. 300 and Rs. 9,270 respectively. There is a constant demand for loans to buy plough bullocks.

The quality of the cattle is poor, and the attempt to introduce Hissār bulls into the District was a failure. The buffaloes, however, are of an excellent breed. Large numbers of camels and donkeys are kept in the Marwat *tahsīl*, and of fat-tailed sheep in the Bannu *tahsīl*. The Wazīr breed of horses used to be popular, but is now virtually extinct, though the District is well adapted for horse-breeding. The District Board maintains 2 horse and 2 donkey stallions.

Of the total area cultivated in 1903–4, 242 square miles, or 30 per cent., were classed as irrigated; of this, all but 93 acres irrigated from wells was supplied by canals. The canals take off from the Kurram and other hill streams, and are mostly the property of the people themselves, though in some cases the water belongs to the Government. Many date from an extreme antiquity. Bābar, writing in 1505, says: 'The Bangash [Kurram] river runs through the Bannu territory, and by means of it chiefly the country is irrigated.' Many centuries of contention and compromise have evolved a most elaborate system of irrigation and rights in water, which is now administered by the Deputy-Commissioner.

The forest lands are quite insignificant, and outside the Bannu oasis the District is badly wooded.

Bannu possesses few minerals of commercial value. Rock-salt exists, but is not worked; and limestone, building stone, and flint are the only mineral products utilized. Impure carbonate of soda is made from the ashes of the *Caroxylon Griffithii*.

Trade and communications.

Cotton is woven in most villages, but in quantities only sufficient for local requirements. The woollen-pile rugs locally known as *nakhais* and the silk-embroidered *phūlkāris* of the District have some artistic merit, but are not largely made. The lac work is inferior in technique to that of Dera Ismail Khān. Otherwise the District is destitute of any arts and manufactures, beyond the wares turned out to supply the everyday wants of the people. The clay used in unglazed pottery work at Bannu is of a superior quality and some of the designs are quaint.

The chief exports are raw cotton, wool, gram, wheat, oilseeds, millet, and pulses; and the chief imports are sugar, piece-goods, indigo, *ghī*, wood, oil, iron, and tobacco. Bannu and Lakki are the only centres of commerce. The District has a surplus of agricultural produce, but depends on the Punjab for all manufactured articles.

No railway traverses the District, but the North-Western Railway has

an out-station at Bannu for forwarding goods. This town is connected with Dera Ismail Khān and Kohāt by a metalled road under the Military Works department, on which a line of tongas runs. The road up the Tochi is also metalled and possesses a tonga service. All other roads are unmetalled and are managed for the most part by the District board. Some of the roads are little better than sandy tracts; others, however, passing over firmer soil, are well defined, having a clayey surface, which is as hard as iron in dry weather but quickly becomes cut up after heavy rain. In the Bannu *tahsīl* the roads are much intersected by irrigation channels and the courses of mountain streams. The most important are the road between Lakki and Naurang Sarai, and the frontier road, a mule track connecting the outposts on the border. There are 81 miles of metalled roads, all under the Military Works department, and 432 miles of unmetalled roads, of which 22 miles are Imperial, 91 Provincial, and 319 District.

Famine.

Though the District was classed by the Irrigation Commission as secure from famine, the Marwat *tahsīl* has recently been declared insecure. The area of crops that matured in the famine year 1899–1900 amounted to 77 per cent. of the average of the preceding five years.

Administration.

For administrative purposes the District is divided into the two *tahsīls* of Bannu and Marwat, each under a *tahsīldār* and a *naib-tahsīldār*. The Deputy-Commissioner is aided by an Assistant Commissioner (who holds the office of District Judge of Bannu and Dera Ismail Khān, and also that of additional District Magistrate of Bannu), an Assistant Commissioner in charge of the border military police, and two Extra Assistant Commissioners, one of whom is in charge of the District treasury.

The Deputy-Commissioner, as District Magistrate, and the District Judge are both supervised in judicial matters by the Divisional Judge of the Derajāt Civil Division. The District Judge has one Munsif under him and one honorary Munsif, both at head-quarters. Violent crime used to be the chief characteristic of the District; and murder, dacoity, highway robbery, and armed burglary were common, being carried out by the trans-border outlaws with the connivance of the leading men of the District. The military operations, however, against the Kābul Khel in November, 1902, which ended in the surrender of a large number of outlaws, had an excellent effect in tranquillizing the border, and crime has much diminished since that year. Rigorous enforcement of the preventive sections of the Frontier Crimes Regulation and Penal Code does much to preserve the security of the border. The inhabitants of Bannu are notoriously litigious, civil cases being more frequently instituted than in any other District on the frontier.

Our knowledge of the Bannu *tahsīl* before annexation is of the vaguest

description. The administrative unit, political or fiscal, was the *tappa*, a block of villages whose limits varied with the authority of its chief. Each *tappa* was a little independent state, warring with its neighbours from time to time and gaining or losing territory as the case might be. Force was the only method of revenue collection. When the tax-gatherer, whether Durrāni or Sikh, came with his army and demanded tribute or revenue, he levied his demand on the chief man of the *tappa*, who proceeded to exact the sum required from such of the landholders as had not absconded, bribing the Saiyids to help by exempting them from contributions, and rewarding any one who paid a defaulter's share with that defaulter's land. For the first four years of British rule (1849–53) the revenue was collected by crop appraisement of each field. In 1852–3 the first summary settlement was made on the average of these collections. This was revised, with a slight increase, in 1859. The first demand was Rs. 1,04,000 and the second Rs. 1,13,000. Marwat under native rule was administered with a firmer hand. Under the Durrānis the Marwats paid a sum varying from Rs. 12,000 to Rs. 40,000 as revenue or tribute, generally exacted at the point of the sword, while under the Nawāb of Mankerā or the Sikh rulers of Multān, both of them uncomfortably near neighbours, a full demand was exacted. Herbert Edwardes took over Marwat from Malik Fateh Khān Tiwānā, the Sikh lessee, in 1847, and imposed a revenue of one-fourth of the gross produce in cash. This proportion was maintained by John Nicholson, who made the first summary settlement in 1853. The demand was severe and large remissions were necessary. The second summary settlement was made on the same lines in 1858, and pressed unequally on the people, besides raising the total demand from 2·2 lakhs to nearly 2·4.

In 1872 the regular settlement of the District began. Although the actual assessments fell very much below the standard rate of half the net 'assets,' the new demand for the two *tahsīls* was 3 lakhs (including cesses), while the revenue of the preceding year had been 2¾ lakhs. The settlement has nowhere pressed severely, but suspensions have been found necessary in years of scarcity.

The latest revision began in 1903, when it was found that the area under cultivation had increased since settlement by 43 per cent. and the irrigated area had doubled in Marwat and increased by 46 per cent. in Bannu, while prices had risen at least 25 per cent. After allowing for frontier remissions and considerations of general policy, it is estimated that the result will be an increase of Rs. 1,17,000, or 47 per cent., of which Rs. 1,10,000 will be realized by Government. The rates of assessment at the last settlement were, per acre: 'dry' land, R. 0–6–6 (maximum, 12 annas; minimum, 1 anna); and 'wet' land, R. 0–9–6 (maximum, 15 annas; minimum, 3 annas).

The collections of land revenue alone and of total revenue have been as follows, in thousands of rupees :—

	1880–1.*	1890–1.*	1900–1.*	1903–4.
Land revenue . .	3,06	4,37	4,07	2,55
Total revenue . .	4,79	5,77	7,15	2,59

* These figures are for the old District, including the Miānwāli and Isa Khel *tahsīls*.

The District contains the two municipalities of BANNU (Edwardesābād) and LAKKI. Local affairs elsewhere are managed by the District board. Its income in 1903–4 amounted to Rs. 36,300, chiefly derived from cesses, and its expenditure to Rs. 33,400, public works forming the largest item.

The regular police force consists of 410 of all ranks, of whom 58 are municipal police. The village watchmen number 334. There are 8 police stations, 2 outposts, and 7 road-posts. The border military police number 421, under a commandant who is an Assistant Commissioner. The force is directly under the orders of the Deputy-Commissioner, and is chiefly employed on the watch and ward of the border. The District jail at head-quarters can accommodate about 320 prisoners.

Only 4·1 per cent. of the population were able to read and write in 1901, the proportion being 7·3 among males, 0·2 among females. The Sikhs, with 53·7 per cent., are by far the most advanced community. Next come the Hindus (21·8), while the Muhammadan cultivators are still markedly backward (1·5). The District is, however, making distinct progress in literacy, and even Wazīrs are sometimes met with who appreciate the value of reading and writing. The spread of female education, due mainly to the missionaries but partly also to the Arya Samāj, has been steady.

The number of pupils under instruction was 6,501 in 1880–1, 5,166[1] in 1890–1, 7,234[1] in 1900–1, and 3,447 in 1903–4. In the last year the District possessed 3 secondary and 22 primary (public) schools, and 48 advanced and 127 elementary (private) schools, with 55 girls in the public schools. The total expenditure on education was Rs. 25,000, of which Government contributed Rs. 4,700, Local funds Rs. 5,100, municipal funds Rs. 11,200, and fees Rs. 3,900.

Besides the civil hospital at Bannu, the District possesses one dispensary at Lakki, with 53 beds in all. In 1904 the number of cases treated was 31,888, including 687 in-patients, and 1,330 operations were performed. The income was Rs. 7,400, of which Local funds contributed Rs. 1,500 and municipal funds Rs. 5,900.

[1] These figures are for the old District, including the Miānwāli and Isa Khel *tahsīls*.

The number of successful vaccinations in 1903-4 amounted to 10,424, representing 45 per 1,000 of the population. Vaccination is compulsory only in the town of Bannu.

[*District Gazetteer* (1877, under revision).]

Bannu Tahsīl.—*Tahsīl* of Bannu District, North-West Frontier Province, lying between 32° 41′ and 33° 5′ N. and 70° 22′ and 70° 58′ E., with an area of 443 square miles. The *tahsīl* is a green, fertile oasis, well wooded and watered, and much intersected by water-channels. Its population in 1901 was 130,444, compared with 120,324 in 1891. It contains the town of BANNU (population, 14,291), the *tahsīl* and District head-quarters; and 217 villages. The land revenue and cesses amounted in 1903-4 to Rs. 1,62,930.

Bannu Town (or Edwardesābād).—Head-quarters of the District and *tahsīl* of Bannu, North-West Frontier Province, situated in 33° 0′ N. and 70° 36′ E., near the north-west corner of the District, one mile south of the Kurram river, 79 south of Kohāt, and 89 north of Dera Ismail Khān. Population (1901), 14,291, including cantonment and civil lines (4,349). It was founded in 1848 by Lieutenant (afterwards Sir Herbert) Edwardes, who selected the site for political reasons. The fort, erected at the same time, bore the name of Dhulīpgarh (Dalīpgarh), in honour of the Mahārājā of Lahore; and the bazar was also known as Dhulīpnagar (Dalīpnagar). A town gradually grew up around the bazar, and many Hindu traders removed hither from Bāzār Ahmad Khān, which had formed the commercial centre of the Bannu valley prior to annexation. The Church Missionary Society supports a small church and a high school founded in 1865. The cantonment centres in the fort of Dhulīpgarh. Its garrison consists of a mountain battery, a regiment of native cavalry, and two regiments of infantry. The municipality was constituted in 1867. The municipal receipts and expenditure during the ten years ending 1903-4 averaged Rs. 46,000. In 1903-4 the income was Rs. 47,000, chiefly derived from octroi; and the expenditure was Rs. 55,000. The receipts and expenditure of cantonment funds during the ten years ending 1902-3 averaged Rs. 4,200 and Rs. 3,700. The profuse irrigation and insufficient drainage of the surrounding fields render Bannu an unhealthy station. The town has a considerable trade, embracing the whole traffic in local produce of the Bannu valley. The nearest railway station is at Kohāt on the Khushālgarh-Thal branch of the North-Western Railway, 79 miles distant by road. A weekly fair collects an average number of 8,000 buyers and sellers. The chief articles of trade are cloth, live-stock, wool, cotton, tobacco, and grain. Bannu possesses a dispensary and two high schools, a public library, and a town hall known as the Nicholson Memorial.

Bannūr.—Town in the Tirumakūdal-Narsipur *tāluk* of Mysore District, Mysore, situated in 12° 20′ N. and 76° 52′ E., 16 miles south-east

of Seringapatam. Population (1901), 5,119. The Sanskrit name was Vahnipura, which became Banniyūr, and now Bannūr. This was an important place in the eighth and tenth centuries under the Gangas. In the twelfth century it was a great *agrahāra* named Jananāthachaturvedimangala, with 1,200 Brāhmans. Under Vijayanagar rule grants were made there by the Mysore Rājās and local chiefs. The municipality dates from 1899. The receipts and expenditure during the two years ending 1901 averaged Rs. 2,100 and Rs. 1,700. In 1903-4 they were Rs. 1,800 and Rs. 1,000.

Banpās.—Village in the head-quarters subdivision of Burdwān District, Bengal, situated in 23° 23′ N. and 87° 49′ E. Population (1901), 1,425. It is noted for its manufactures of brass and bell-metal ware and cutlery.

Bānsbāria (*Bānsbāti*, 'the place of bamboos').—Town in the head-quarters subdivision of Hooghly District, Bengal, situated in 22° 58′ N. and 88° 24′ E., on the west bank of the Hooghly. Population (1901), 6,473. The town contains a group of three temples, of which the best known is that of Hanseswarī, with thirteen pinnacles and an image of Siva in each. It was built in 1819 by Rānī Sankarī Dāsī, the wife of a *zamīndār* of the place, at a cost of 5 lakhs of rupees, and was formerly protected against the Marāthās by a fort armed with four cannon. The group of temples occupies 15 acres of ground. Several *tols* or Sanskrit schools were formerly maintained at Bānsbāria, but Sanskrit studies are now on the decline. A considerable trade in brass and bell-metal ware and bricks is carried on. Bānsbāria was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 6,600, and the expenditure Rs. 5,600. In 1903-4 the income was Rs. 9,000, of which Rs. 4,000 was derived from a tax on persons; and the expenditure was Rs. 6,600. The old village of TRIBENI is included in the municipal area.

Bānsda State (*Wānsda*).—State in the Political Agency of Surat, Bombay, lying between 20° 42′ and 20° 56′ N. and 73° 18′ and 73° 34′ E., with an area of 215 square miles. It is bounded on the west by Surat District; on the north by the State of Baroda; on the east by the Dāng States; and on the south by the State of Dharampur. With the exception of a few villages bordering on Surat, almost the whole country is covered with forest, the surface in some places being level and in others rising into rocks and small hills. The annual rainfall averages about 80 inches. The climate is unhealthy, fevers and other diseases prevailing throughout the year. At Unai, on the border of Bānsda and Baroda territory and 7 miles from Bānsda, is a hot spring, the temperature of which is generally but little below boiling-point; but once a year, at the time of the March full moon, the heat abates sufficiently to allow a company of pilgrims and devotees to bathe in it.

The fair at this period is attended by 6,000 or 7,000 people and lasts for six days.

The family of the chief are Hindus of Rājput extraction, claiming descent from the Solanki race. The ruins of the fortified enclosure near Bānsda, and of several temples and works of irrigation, point to a former period of prosperity. At one time the chiefs probably had possessions extending to the sea-coast; but by the advance of the Musalmāns they were gradually driven to seek refuge in the more thickly wooded part of their dominions. The Marāthās seem to have been the first to bring the chiefs entirely into subjection and to impose a tribute upon them. The right of levying this tribute was transferred by the Peshwā to the British under the Treaty of Bassein (1802). The State now pays to the Government a tribute of Rs. 7,351 and a *chauth* of Rs. 1,500. The chief bears the title of Rājā and is entitled to a salute of 9 guns. The family follows the rule of primogeniture and has received a *sanad* authorizing adoption.

According to the Census of 1901, the population numbered 40,382: namely, 39,256 Hindus, 974 Musalmāns, and 104 Pārsīs, distributed in one town (BĀNSDA) and 86 villages. The population consists almost entirely of wild tribes, such as Koknas, Chodhrās, Dhondias, and Gamtas, who speak a corrupt Gujarātī.

There are some tracts of black soil, but over the greater part of the State the soil is light-coloured. The total cultivable area is 109 square miles, of which 56½ square miles were cultivated in 1903-4, 50 remained waste, and the remainder had been alienated. The chief crops are rice, *nāgli*, *kodra*, and pulse. Cotton and wheat have recently been introduced and are progressing well. Seventy-five square miles of land are under forest, managed on the British system of conservancy. The chief manufactures are cotton tape, mats, fans, baskets, and coarse woollen carpets and cloths.

The Rājā has power to try his own subjects for capital offences. He maintains no regular troops, but has a force consisting of 34 mounted men and 33 Arabs who perform miscellaneous duties about the court. The number of police is 131. The State contains one jail, with a daily average of seven prisoners in 1903-4. Formerly the land revenue system consisted in leasing groups of villages to contractors (*ijāradārs*) for terms of five years. But when in 1876 Bānsda came under British administration on account of the minority of the chief, it was determined, as the leases fell in, to replace them by a settlement direct with the cultivators. Since the introduction of survey operations, which were completed in 1884, the lands have been systematically classed and assessed. The rates per acre now in force range from Rs. 2-5 to Rs. 11-4 for rice land, and from 2 annas to Rs. 4-6 for 'dry crops.' The gross revenue and expenditure of the State in 1903-4 were about

$3\frac{1}{2}$ lakhs and $2\frac{1}{5}$ lakhs, including one lakh spent as special charges. The principal items of revenue are land and excise, each over a lakh; forests, Rs. 10,000; and a sum of about Rs. 3,400 paid by the Baroda State and the British Government. In 1873 the Rājā agreed to abolish transit duties for an annual payment of Rs. 8,698 from the British Government. There are fourteen boys' schools and one girls' school in the State, maintained at a cost of Rs. 5,271, with an average daily attendance in 1903–4 of 416. Only 1,289 persons were returned as literate in 1901. The boys of the wild tribes are allowed free education in the State schools. Bānsda contains a hospital and a travelling dispensary, which together treated 28,000 persons in 1903–4. The expenditure of the Bānsda municipality is wholly borne by the State.

Bānsda Town.—Chief town of the State of the same name in the Surat Agency, Bombay, situated in 20° 47′ N. and 73° 28′ E. Population (1901), 3,760. The town contains a dispensary, and is administered as a municipality at the cost of the State.

Bānsdīh Tahsīl.—North-central *tahsīl* of Balliā District, United Provinces, comprising the *parganas* of Kharīd and Sikandarpur (East), and lying south of the Gogra between 25° 47′ and 26° 7′ N. and 83° 54′ and 84° 31′ E., with an area of 371 square miles. Population increased from 281,531 in 1891 to 293,919 in 1901. There are 515 villages and five towns: SAHATWĀR (population, 10,784), BĀNSDĪH, the *tahsīl* headquarters (10,024), MANIAR (9,483), REOTĪ (8,631), and SIKANDARPUR (7,414). The demand for land revenue in 1903–4 was Rs. 1,74,000, and for cesses Rs. 47,000. The density of population, 792 persons per square mile, is about the District average. The *tahsīl* is much intersected by side channels from the Gogra, and a considerable portion is flooded annually. The area under cultivation in 1903–4 was 256 square miles, of which 92 were irrigated. Irrigation is more required in this *tahsīl* than in the alluvial tract bordering on the Ganges. Wells supply about eight-ninths of the irrigated area, and tanks and streams the remainder.

Bānsdīh Town.—Head-quarters of the *tahsīl* of the same name in Balliā District, United Provinces, situated in 25° 53′ N. and 84° 14′ E., 10 miles north of Balliā town. Population (1901), 10,024. The town formerly belonged to Naraulīā Rājputs, whose possessions have been bought up by the Bhuinhārs. It is administered under Act XX of 1856, with an income of about Rs. 1,200. Besides the ordinary offices, Bānsdīh contains a dispensary and a town school with 84 pupils. There is little or no trade.

Bānsgaon Tahsīl.—South-western *tahsīl* of Gorakhpur District, United Provinces, comprising the *parganas* of Bhauāpār, Unaula, Dhuriāpār, and Chillūpār, and lying between 26° 14′ and 26° 43′ N. and 83° 4′ and 83° 44′ E., with an area of 614 square miles. Popu-

lation fell from 451,606 in 1891 to 438,364 in 1901. There are 1,667 villages and four towns, of which BARHALGANJ (population, 5,181) and BĀNSGAON (5,034), the *tahsīl* head-quarters, are the largest. The demand for land revenue in 1903-4 was Rs. 3,59,000, and for cesses Rs. 72,000. In 1904 the *tahsīl* was reduced from the limits described above by the transfer of 115 villages with an area of 52 square miles, which lay south of the Gogra, to Azamgarh District. The land revenue and cesses due from these villages amounted to Rs. 18,000 and Rs. 3,000 respectively. The density of population, 714 persons per square mile, is above the District average. Bānsgaon is bounded on the north by the Amī river, on the south by the Gogra, and on the east by the Rāptī. After heavy rains a considerable area near the Amī and Rāptī is flooded, owing to the inability of the rivers to carry off the drainage. The Kuwānā flows across the south-west corner. The area under cultivation in 1903-4 was 429 square miles, of which 199 were irrigated. Wells supply about a quarter of the irrigated area, and tanks, swamps, and small streams the remainder.

Bānsgaon Town. - Head-quarters of the *tahsīl* of the same name in Gorakhpur District, United Provinces, situated in 26° 33′ N. and 83° 22′ E., 19 miles south of Gorakhpur city. Population (1901), 5,034. The town is composed of ten hamlets, and is purely agricultural. There is no trade, and the place derives its only importance from its position as head-quarters of a *tahsīldār* and a Munsif. The town school has about 275 pupils, and a girls' school has 17.

Bansgawā.—Village in the Padraunā *tahsīl* of Gorakhpur District, United Provinces, situated in 26° 48′ N. and 84° 12′ E., 64 miles east of Gorakhpur city. Population (1901), 5,009. An aided school has 31 pupils.

Bānsī.—North-eastern *tahsīl* of Bastī District, United Provinces, comprising the *parganas* of Bināyakpur and Bānsī (East), and lying between 27° and 27° 28′ N. and 82° 46′ and 83° 14′ E., with an area of 621 square miles. Population increased from 362,724 in 1891 to 402,277 in 1901, the rate of increase being the highest in the District. There are 1,343 villages and only one town, USKĀ (population, 6,718). The demand for land revenue in 1903-4 was Rs. 3,96,000, and for cesses Rs. 77,000. The density of population, 648 persons per square mile, is almost the District average. The *tahsīl* extends from the border of Nepāl to the south of the Rāptī river. The northern portion is intersected by a number of small streams, and chiefly produces rice. The area under cultivation in 1903-4 was 463 square miles, of which 144 were irrigated. Tanks and swamps are the chief sources of supply; but the smaller rivers are also largely used, and an extensive system of dams and irrigation channels has been constructed by European *zamīndārs.*

Bānsī.—Principal town of an estate of the same name in the State of Udaipur, Rājputāna, situated in 24° 20′ N. and 74° 24′ E., about 47 miles south-east of Udaipur city. Population (1901), 1,265. The estate, which is held by one of the first-class nobles of Mewār, who is styled Rāwat, consists of 59 villages, containing 5,736 inhabitants, of whom over 41 per cent. are Bhīls. The income is about Rs. 24,000, and a tribute of about Rs. 162 is paid to the Darbār. The Rāwats of Bānsī belong to the Shaktāwat family of the Sesodia Rājputs.

Bānsror.—Estate and head-quarters thereof in the State of Udaipur, Rājputāna. *See* BHAINSRORGARH.

Bānswāda.—Formerly a *tāluk* in Indūr (now Nizāmābād) District, Hyderābād State. In 1901 the area was 542 square miles, and the population, including *jāgīrs*, was 80,888, compared with 78,657 in 1891. It contained 141 villages, of which 76 were *jāgīr*. The land revenue in 1901 was 2·4 lakhs. In 1905 the *tāluk* was divided between the Deglūr *tāluk* of Nānder District and Bodhan and Yellāreddipet in Nizāmābād.

Bānswāra State.—The southernmost State in Rājputāna, lying between 23° 3′ and 23° 55′ N. and 73° 58′ and 74° 47′ E., with an area of 1,946 square miles. It is bounded on the north by Partābgarh and Mewār; on the west by Dūngarpur and Sunth; on the south by Jhālod, Jhābua, and a portion of the Petlāwad *pargana* of Indore; and on the east by Sailāna, Ratlām, and Partābgarh. It is said to take its name from a Bhīl chieftain named Wāsna, whose *pāl* or village was on the site of the present town of Bānswāra, and who was defeated and slain about 1530 by Jagmāl, the first chief of this State. Others say the word means the country of the bamboo (*bāns*).

Physical aspects.

The western portion of the State is comparatively open and well cultivated; but the rest of the country, especially in the south and east, is covered with rugged hills, rocks, scrub jungle, and woodland. A line of hills runs all through the eastern part, attaining in places an altitude of from 1,700 to 1,900 feet. After heavy rains, the principal river, the Mahī, is impassable even by rafts, sometimes for days together. It is said to have overflowed its banks in 1858, inundating the neighbouring lands and causing much loss of life. Its chief tributary is the Anās, which enters the State in the south, and flows first in a northerly direction forming the boundary with Jhālod, and next west, the total course in or along the border of Bānswāra being about 50 miles. There are numerous minor rivers or streams, the more important being the Erau or Airāv and the Chāp. The country has been described as the most beautiful portion of Rājputāna. It looks its best just after the rains, when the varied hues of the foliage, the luxuriant growth of the tall

grasses, and the streams dashing down the hill-sides or purling through shady glens, between banks fringed with ferns and flowers, present a most pleasing picture.

In the western part of the State the rocks consist of gneiss, upon which rest unconformably a few outliers of the schists and quartzites of the Arāvalli and Delhi systems respectively, while in the east these rocks are covered by Deccan trap.

Besides the ordinary small game, including jungle-fowl, a few tigers, leopards, bears, *sāmbar* (*Cervus unicolor*), and *chītal* (*C. axis*) are to be found, and occasionally wild dogs and wolves.

The climate is relaxing and generally unpleasant; fevers of a malignant nature prevail during the two months succeeding the rains. The temperature at the capital varies from 58° in the winter to 108° in the summer, while the annual rainfall averages nearly 38 inches, ranging from over 65 inches in 1893 to about 14 inches in 1899. The fall in the south-east of the State is generally slightly heavier than at the capital.

History.

From about the beginning of the thirteenth to the beginning of the sixteenth century the greater part of the country now styled Bānswāra was ruled by the chiefs of DŪNGARPUR or Bāgar, as the entire tract was, and is even now frequently, called; and it became a separate State about 1530. Two accounts are given of the manner in which this occurred. One story relates that Udai Singh, chief of Bāgar, who was killed at the battle of Khānua in March, 1527, ordered that, on his death, his territory should be divided between his two sons, Prithwī Rāj and Jagmāl, and that this was done, the latter receiving the eastern portion as his share. The other account is that Jagmāl was left for dead at Khānua, but recovered, and, on returning to his country, was disowned and treated as an impostor. He thereupon betook himself to the hills north of the present town of Bānswāra, and proceeded to harass his elder brother, Prithwī Rāj. Finding this continual border warfare intolerable, the two brothers agreed to accept a partition of their lands by the Rājā of Dhār, and accordingly the river Mahī was fixed as the boundary between the two States of Bānswāra and Dūngarpur. Whichever account be correct, and the latter is believed to be the more trustworthy, the chiefs of Bānswāra are a junior branch of the Dūngarpur family, and consequently Sesodia Rājputs of the Ahāriya sept. Of subsequent chiefs, two are worthy of mention: namely, Kushāl Singh, who, towards the end of the seventeenth century, is said to have wrested from the Bhīls the country in the south-east and called it KUSHĀLGARH after himself; and Prithwī Singh (1747–86), who plundered the neighbouring State of Sunth and seized its district of Chilkāri or Shergarh in the south-west of Bānswāra. These two tracts are now held respec-

tively by the Raos of Kushālgarh and Garhi, two of the principal nobles. Towards the end of the eighteenth century Bānswāra became more or less subject to the Marāthās, and paid tribute to the Rājā of Dhār. In 1812 the Mahārāwal offered to become tributary to the British Government on condition of the expulsion of the Marāthās, but no definite relations were formed with him till the end of 1818. By the treaty then concluded he agreed to act in subordinate co-operation to, and settle his affairs in accordance with the advice of, the British Government, and to pay to it all arrears of tribute due to Dhār or any other State, besides whatever tribute Government might deem adequate, provided it did not exceed three-eighths of his revenue. The tribute proper has varied from time to time, but for a good many years it was *Sālim shāhi* Rs. 35,000. Since 1904 it has been fixed at Rs. 17,500, British coin. In addition to tribute proper, the State has paid annually, since 1889, a sum of Rs. 5,000 towards the cost of additional political supervision rendered necessary by the disorders of its administration. The late Mahārāwal, Lachhman Singh, died in 1905, after a rule of sixty-one years, and was succeeded by his eldest son, Shambhu Singh, who was born in October, 1868. The chief of this State bears the title of Mahārāwal, and receives a salute of 15 guns.

There is not much of archaeological interest in Bānswāra, apart from the ruins of a fine Jain temple at KĀLINJARA and the remains of about a dozen Hindu and Jain temples at the village of Arthuna in the south-west. An inscription dated 1080, found in the Mandanesh or Mandlesar temple at Arthuna, shows that the latter place was once an extensive city (Uchhunak Nagar or Pātan), the capital of the Paramāra chiefs of Bāgar.

Population.

The number of towns and villages in the State is 1,287, and the population at the three enumerations was: (1881) 152,045, (1891) 211,641, and (1901) 165,350. The last Census was the first regular one ever taken; for, in 1881, the population of the Kushālgarh estate and many of the Bhīls in the rest of the territory were not actually counted, their numbers being roughly guessed, while in 1891 a similar procedure was followed as regards the Bhīls of Kushālgarh. The decline in 1901 was due in part to more accurate enumeration at that Census, and in part to excessive mortality during, and immediately after, the famine of 1899–1900. The State, which in 1901 was split up into an unnecessarily large number of districts or *thānas*, now consists of two divisions, the northern and the southern, more or less equal in area and population. The head-quarters of the former are at Bhongra, and of the latter at Kālinjara. More than 63 per cent. of the people are Animists and 30 per cent. Hindus. The language mainly spoken is Bhīlī or Vāgdī.

By far the most numerous tribe is that of the BHĪLS, who, in 1901, numbered 104,329, or 63 per cent. of the total; they are to be found throughout the State, and are especially troublesome in the south. Next come the Kunbīs (11,000), the Brāhmans (9,600), the Mahājans (7,000), and the Rājputs (5,000). About 67 per cent. of the population are dependent on the land.

Agriculture.

Agriculture does not flourish as well as might be expected in a country so favoured by nature as Bānswāra. The soil is, for the most part, excellent. The black cotton variety in the west, especially near the Mahī river, is said to be sufficiently fertile to yield two full crops annually without artificial irrigation, while in the north a rich red loam is found. But almost all of the agriculturists are Bhīls, who, besides being unskilled, are lazy; they cultivate chiefly in the rains, and are conservative or shy, confining their operations to small patches round their huts. The Brāhmans and Pātels, found mostly in the west, are industrious cultivators, but few in number; without much trouble or expense they gather fine crops of maize and rice in the autumn, and wheat, barley, gram, and sugar-cane in the spring; but the Bhīls prefer the *wālar* or *wālra* system of cultivation, so injurious to the forests. It consists of cutting down trees and shrubs and strewing them over the ground, where they are left to dry till the end of the hot season, when they are burnt. After the first fall of rain the land is ploughed once, and sown generally with maize or inferior millets known locally as *kuri* and *kodra*.

Irrigation is mainly from wells and tanks, but only a small area is supplied. Large stretches of fertile land, in which water could easily be obtained, do not possess a single well, while tanks are few and far between, though something has been done in this direction during recent years.

More than half of the State is covered with jungle, the forests being most dense in the north-east. The best trees are teak, black-wood, ebony, *pīpal* (*Ficus religiosa*), *haldu* (*Adina cordifolia*), *sālar* (*Boswellia serrata*), *dhāk* (*Butea frondosa*), and *kadamb* (*Anthocephalus Cadamba*); but they are in no way preserved and are of little benefit to the Darbār. The fruit trees include the mango and the *mahuā* (*Bassia latifolia*); the wild date-palm is to be found in all low-lying ground, and the bamboo on the hills. The Bhīl, however, spares none but sacred groves and fruit trees, and the forests are being gradually ruined.

The mineral products are unimportant, the old iron mines at Khāmera and Lohāria have long been abandoned, and the quarries at Talwāra and Chhīnch are only occasionally worked, yielding a hard white stone fairly suitable for building.

Manufactures are primitive, consisting of the production of coarse cotton cloth, a little silver jewellery, lac bangles, and wooden toys.

Trade and communications.

The trade is with the neighbouring tracts, the chief exports in good years being grain, wood, honey, and *mahuā* flowers, and the chief imports piece-goods, salt, and tobacco.

There is no railway in the State, the nearest stations being Namlī and Ratlām on the Rājputāna-Mālwā Railway to the east, and Bhairongarh on the Godhra-Ratlām line to the south. The roads are all unmetalled, but are generally practicable for carts during the greater part of the year. There are four British post offices (at Bānswāra town, Chhīnch, Garhi, and Kushālgarh) and one telegraph office (at Bānswāra).

Famine.

No records exist of any severe famine save that of 1899–1900; but 1836, 1861, 1865, and 1877–8 were years of scarcity and high prices. In 1899–1900 the rainfall was only about 14 inches, and the harvest was more or less a failure. Little or nothing was at first done for the Bhīls, who suffered severely and took to crime. Subsequent relief measures did a good deal to allay the distress, but the mortality among human beings was higher than it should have been and from 30 to 50 per cent. of the cattle perished. The expenditure, including advances to agriculturists and land revenue remitted and suspended, was about 3 lakhs. The distress in 1901–2 was not so acute, and was due as much to a plague of rats as to short rainfall. The expenditure on this occasion approached a lakh.

Administration.

The State is ordinarily governed by the chief with the assistance of a Kāmdār or minister and a *thānadār*, possessing very limited powers, in each of the districts. In consequence of the advanced age of the late chief, the indebtedness of the State, and misgovernment generally, it was found necessary in 1904 to place the administration in the hands of a council under the direct control of a Political officer; and this arrangement continued till 1906, when Mahārāwal Shambhu Singh was invested with powers. The territory is divided into two districts, each of which is under a *tahsīldār*.

The judicial machinery was formerly of the rudest kind. The *thānadārs* imposed fines for petty offences, but their main duty was to arrest accused persons, hold a preliminary inquiry, and forward the cases to the capital. The powers of the Faujdār at the capital were similar; and in this way all criminal cases were decided by the Kāmdār, subject, at uncertain periods, to the approval or otherwise of the chief. Most of the civil suits were decided by *panchāyat*, a tribunal well adapted to the feelings of the people, as the decisions generally gave satisfaction. Under the system recently introduced, the *tahsīldārs* are third-class magistrates, the Faujdār is a first-class magistrate, and the

council, presided over by the Mahārāwal, is a Sessions Court, and also the final court of appeal. Sentences of death for the present require the confirmation of the Governor-General's Agent in Rājputāna. On the civil side, the Faujdār tries suits not decided by *panchāyats*, provided their value does not exceed Rs. 10,000, while the council deals with suits beyond his powers.

The normal revenue of the State, excluding the income of the nobles, is about 1·75 lakhs, of which Rs. 85,000 is derived from land, Rs. 40,000 from customs, and Rs. 15,000 as tribute from *jāgīrdārs*. The normal expenditure is about 1·35 lakhs, the main items being cost of administration (Rs. 32,000), privy purse and palace (Rs. 27,000), army and police (Rs. 25,000), and tribute to Government, including cost of additional political supervision (Rs. 22,500). The State owes a little less than 2 lakhs to the Government of India.

The coins most commonly used are the *Sālim shāhi*, minted across the border in Partābgarh. In 1904 an attempt was made to introduce the British currency; but as the exchange rate fixed by Government was below the actual market rate during the period of conversion operations, only 202 *Sālim shāhi* rupees were tendered by the public for exchange.

The land revenue system is primitive, and there is no fixed method of assessment or collection. In some cases the demand is fixed and levied in cash; in other cases the amount to be paid is determined after an inspection of the crops either before or after they have been cut, and is levied in cash or in kind, or both. Again, whole villages may be given in contract for a fixed sum, or the land may be leased to, and the revenue collected from, individual cultivators. The holders of *jāgīr* lands pay tribute (*tānka*); they have to perform service, and can be dispossessed for misconduct. *Khairāt* villages, or religious and charitable allotments, are held rent-free and the holders pay no tribute. These villages are inalienable and may be said to have been granted practically in perpetuity. The first cadastral survey was started in 1904, and was followed by a rough settlement to be finished by the end of 1906.

Police duties used to be performed by a so-called army of 19 cavalry and 461 infantry, all irregulars; but this army has been abolished, and an efficient police force of 180 of all ranks, including 15 mounted men, has recently been substituted. The State jail at the capital is perhaps the most unhealthy prison in Rājputāna, and a new one is to be built when funds are available. Lock-ups are maintained in the districts and at Kushālgarh.

In 1901 about 2 per cent. of the population were returned as literate (4 per cent. males and 0·1 per cent. females). There were four primary schools, in which Hindī was taught to about 250 boys. In 1903 an

Anglo-vernacular school was started at the capital, and three Hindī schools were opened at other places. The State now contains fourteen schools, including one in the Garhi estate and one in Kushālgarh, and they are attended by 440 boys.

There are two hospitals, one of which has accommodation for 4 in-patients. In 1905 the number of cases treated was 18,664, of whom 29 were in-patients, and 328 operations were performed. The cost of these institutions was about Rs. 1,920.

Vaccination is nowhere compulsory, and, though apparently popular in Kushālgarh, is very backward in Bānswāra proper. Two vaccinators are employed, and in 1904–5 they vaccinated 938 persons, or nearly 6 per 1,000 of the population. In Bānswāra proper about 2 per 1,000 of the population were successfully vaccinated, and in Kushālgarh nearly 35 per 1,000.

[*Rājputāna Gazetteer*, vol. i (1879, under revision).]

Bānswāra Town.—Capital of the State of the same name in Rājputāna, situated in 23° 33′ N. and 74° 27′ E., 42 miles from Namlī and Ratlām stations on the Rājputāna-Mālwā Railway. The population in 1901 was 7,038, of whom nearly 60 per cent. were Hindus and 28 per cent. Musalmāns. The town was founded in the early part of the sixteenth century by Jagmāl, the first chief of Bānswāra, and is said to have been named after a Bhīl chieftain, Wāsna, whom he defeated and killed. It is surrounded by a wall which, except on the south, is in very fair repair. The palace stands on rising ground to the south, and on the crest of a low ridge in its vicinity is a double-storeyed building, called the Shāhi Bilās: to the east among the low hills lies the Bai Tāl, on the embankment of which is a small summer palace, while in a garden about half a mile distant are the *chhatris* or cenotaphs of the rulers of the State. Some old ruins on the top of a hill two miles to the south are said to be the remains of a palace which was the residence of Jagmāl. A fair is held annually in October, which lasts for fifteen days and is attended by some 2,000 visitors. The town possesses a post and telegraph office, a jail which has accommodation for 54 convicts and 14 under-trial prisoners and is quite unsuited for a prison, an Anglo-vernacular school opened in 1903 and attended by about 180 boys, and a hospital with accommodation for 4 in-patients.

Bāntva (or Gidad).—Petty State in KĀTHIĀWĀR, Bombay.

Bāntva.—Chief town of the State of the same name in Kāthiāwār, Bombay, situated in 21° 28′ N. and 70° 7′ E. Population (1901), 8,591. The town is fortified.

Banūr Tahsīl.—North-eastern *tahsīl* of the Pinjaur *nizāmat*, Patiāla State, Punjab, lying between 30° 23′ and 30° 39′ N. and 76° 40′ and 77° E., with an area of 163 square miles. The population in 1901 was

56,674, compared with 60,185 in 1891. The *tahsīl* contains the town of Banūr (population, 5,610), the head-quarters, and 135 villages. The land revenue and cesses amounted in 1903-4 to 1·7 lakhs.

Banūr Town.—Head-quarters of the *tahsīl* of the same name in the Pinjaur *nizāmat*, Patiāla State, Punjab, situated in 30° 34′ N. and 76° 47′ E., 10 miles north-east of Rājpura. Population (1901), 5,610, compared with 6,671 in 1881, a decrease due to its distance from the railway and an unhealthy climate. The ruins that surround it testify to its former importance. Its ancient name is said to have been Pushpa or Popa Nagri or Pushpāwati, 'the city of flowers'; and it was once famous for the scent distilled from its *chambeli* gardens, an industry which has all but disappeared. First mentioned in Bābar's memoirs, it became a *mahāl* of the government of Sirhind under Akbar. It was wrested from the Mughal empire by the Singhpuria Sikhs and Amar Singh, Rājā of Patiāla, after the fall of Sirhind in 1763; and eventually it came into the exclusive possession of Patiāla. It was defended by the old imperial fort of Zulmgarh and one of more recent date. The tomb of Malik Sulaimān, father of the Saiyid ruler Khizr Khān, is shown in the town. Banūr has now no trade worth mention, but contains a vernacular middle school and a dispensary.

Baonī (or Kadaura).—A petty *sanad* State in Central India, under the Bundelkhand Agency, lying between 25° 54′ and 26° 10′ N. and 79° 45′ and 80° 2′ E., with an area of about 122 square miles. It is bounded north by Cawnpore District, west by Jālaun, and on all other sides by the Hamīrpur District of the United Provinces. It takes its name from *bāwan*, 'fifty-two,' the number of villages granted by the original *sanad*. The climate is hot but healthy, and the annual rainfall averages 32 inches.

Baonī is the only Muhammadan State in Bundelkhand. Its chiefs are descendants of the brilliant but unscrupulous Imād-ul-mulk Ghāzī-ud-dīn, the grandson of Asaf Jāh, Nizām of Hyderābād, and Wazīr of the empire for a time. Ghāzī-ud-dīn made terms with the Peshwā, and obtained a *jāgīr* of 52 villages near Kālpī about 1784. When the British supremacy was established, Nawāb Nasīr-ud-daula was found in possession of 49 villages, 3 having been sequestrated by Marāthā officials. The Nawāb in 1806 petitioned for their restoration; and after some discussion the validity of the Peshwā's grant was recognized, and the original holding of 52 villages restored. He was succeeded in 1815 by Amīr-ul-mulk, who was followed by his son Nawāb Muhammad Husain Khān. During the Mutiny of 1857, Nawāb Muhammad Husain Khān and his son Mahdi Hasan Khān, who was actually carrying on the administration, were instrumental in saving the lives of several Europeans at great risk to themselves. In 1862 a *sanad* was granted to the chief guaranteeing the succession, in case of failure

of issue, to his heirs as recognized by Muhammadan law; and in 1863, as a reward for various liberal measures adopted, the chief's titles were increased. In 1874, at the special request of the Nawāb, who was in bad health, the management of the State was taken over by the Government until 1883, when he abdicated in favour of his son, Muhammad Hasan Khān. Land was ceded for the Betwā Canal in 1884. Muhammad Hasan Khān died of cholera in 1893, while on a pilgrimage to Mecca, and was succeeded by the present chief, Muhammad Riāz-ul-Hasan Khān, his nephew, the State remaining under superintendence until 1902. The chief bears the titles of His Highness and Azam-ul-umara, Sāhib Jāh, Mihīn Sardār Nawāb, and receives a salute of 11 guns.

The population at the last three enumerations was: (1881) 17,055, (1891) 18,441, and (1901) 19,780, giving a density of 162 persons per square mile. There has been an increase of 7 per cent. during the last decade. The State contains 52 villages. Hindus number 17,341, or 87 per cent., and Musulmāns 2,415, or 12 per cent. The Banāpharī dialect of Bundelkhandī is the prevailing form of speech. The principal castes are Bundelā Thākurs, 1,900; Ahīrs, 1,500; Kāchhīs, 1,500; Brāhmans, 1,200; Dhīmars and Kolīs, 1,100 each. Among Musalmāns, Shaikhs number 1,400. Agriculture supports 40 per cent. and general labour 32 per cent. of the population.

Of the total area, 66 square miles, or 54 per cent., are cultivated, of which 854 acres are irrigable; 21 square miles are cultivable; 15 square miles are under scrub jungle; and the rest waste. The State lies in a fairly fertile region, growing good crops of all the ordinary grains.

A metalled road is under construction from the chief town of Kadaura to Kālpī on the Great Indian Peninsula Railway, a distance of 15 miles. A British combined post and telegraph office is situated at Kadaura.

The chief personally directs the administration, and in criminal matters exercises the powers of a District Magistrate, all cases beyond these powers being dwelt with by the Political Agent.

The total revenue of the State is one lakh, of which Rs. 95,000 is derived from land. The cost of administration is Rs. 75,000.

The police force consists of 14 men, with 46 *chaukīdārs*. A jail, three vernacular schools, and a hospital are maintained, and the State has lately been surveyed and settled on the same lines as adjoining British territory.

Bāpanattam.—Village in the Palmaner *tāluk* of North Arcot District, Madras, situated in 13° 5′ N. and 78° 41′ E., 17 miles from Palmaner. It is noteworthy for its extraordinary collection of prehistoric kistvaens, which are called by the natives the temples of the Five

Pāndavas. There are others elsewhere in the *tāluk*, but nowhere are they so numerous as near this village. A few of them were explored by Lieut.-Colonel Branfil of the Trigonometrical Survey, who described the result in a paper in vol. x of the *Indian Antiquary*. They are of unusual interest from the size, shape, and arrangement of the slabs of which they are composed, as well as from their great number. It has been suggested that these kistvaens are tombs of the Kurumbas, a tribe who are still very numerous in this neighbourhood and were once, according to tradition, a powerful clan. They are sometimes called *kurumbarkudi* ('Kurumbas' houses') in Tamil.

Bāpatla Tāluk.—*Tāluk* of Guntūr District, Madras, situated on the coast between 15° 37′ and 16° 16′ N. and 80° 8′ and 80° 37′ E., with an area of 679 square miles. The population in 1901 was 213,456, compared with 181,940 in 1891. It contains three towns—BĀPATLA (population, 8,595), the head-quarters, CHĪRĀLA (16,264), and VETAPĀLEMU (9,547)—and 111 villages. The demand on account of land revenue and cesses in 1903-4 amounted to Rs. 9,33,000. Its physical features differ greatly in different parts. The north-west portion is black cotton soil, flooded in wet weather but terribly dried up during the hot season, when the villagers in some places have to carry water for miles to their houses. A large portion is deltaic alluvium and is irrigated, the contrast between the expanse of green rice-fields here and the barren-looking villages a few miles north-west being very striking. Parallel to the coast and for some miles inland runs a long sand ridge, which shuts in the drainage flowing towards the sea and causes an enormous swamp communicating with the sea at Chinna Ganjām.

Bāpatla Town.—Head-quarters of the *tāluk* of the same name in Guntūr District, Madras, situated in 15° 55′ N. and 80° 28′ E., on an elevated sand ridge about 5 miles from the sea. Population (1901), 8,595. It is a station on the East Coast Railway, and contains the offices of a District Munsif and *tahsīldār*, and a good travellers' bungalow. The place is administered as a Union.

Bārā River.—A small river in the North-West Frontier Province, which rises in the highlands of Tīrāh, and flows eastward between the Safed Koh and its offshoot the Surghar range on the north and the Torghar or Ziā-ud-dīn range, which divides it from the Mastūra valley, on the south. In Tīrāh the Bārā valley is closely confined between these lofty, rugged, and pine-clad ranges; but it is thickly dotted with fortified homesteads, and the passage by the British force in 1897 was most arduous. Entering Peshāwar District near Fort Bārā, a few miles south-west of Peshāwar city, the Bārā takes a north-easterly course and falls into the Kābul river after a total length of about 100 miles. The water-supply of Peshāwar is drawn from this river by a closed masonry flume taking off 2 miles above the fort. The river has cut its way

through the soft soil of the Peshāwar valley to a considerable depth and now runs far below the level of the surrounding country, but from time immemorial it has been used for irrigation on both banks. The supply of water is, however, small, not exceeding 158 cubic feet per second as a rule, though after rain in the Tirāh hills it is greatly increased, and the stream then brings down a reddish silt which is extremely fertilizing. In 1898 a weir was constructed near the Afrīdi village of Ilm Gudr at a cost of Rs. 20,000. The Bārā canal, taking off here on the north bank, has two branches named after the tribes whose lands they command: the Khalīl or Sangu, which cost Rs. 23,500; and the Mohmand or Shaikhān, which cost Rs. 20,600. These branches were so designed as not to interfere with the ancient watercourses, over which they were carried by means of aqueducts. Both branches run through tunnels in conglomerate rock immediately above the weir, the Sangu tunnel being 1,600 feet in length and the Shaikhān 710 feet. The head-works are protected by a blockhouse. The canal is managed by the Deputy-Commissioner under the Peshāwar Canal Regulation of 1898. It irrigated 57 square miles in 1903–4.

Bāra Tahsīl.—The westernmost of the three trans-Jumna *tahsīls* in Allahābād District, United Provinces, conterminous with the *pargana* of the same name, lying between 25° 2′ and 25° 22′ N. and 81° 31′ and 81° 49′ E., with an area of 253 square miles. Population fell from 63,816 in 1891 to 55,503 in 1901. There are 237 villages, but no town. The demand for land revenue in 1903–4 was Rs. 1,24,000, and for cesses Rs. 20,000; but the revenue demand has since been reduced to Rs. 1,02,000, and in future will be liable to revision every five years. The density of population, 219 persons per square mile, is the lowest in the District. This *tahsīl* presents the characteristic features of BUNDELKHAND—low ranges of hills dipping in plains of *mār* or black soil, and stretches of barren stony ground. Rice is largely grown in the best *mār* soil. *Kisārī dāl* (*Lathyrus sativus*) is also common, and the effects of its consumption are seen in the number of cripples in every village. In 1903–4 the area under cultivation was 122 square miles, of which only 2 were irrigated.

Bāra Town.—Town in the Zamānia *tahsīl* of Ghāzīpur District, United Provinces, situated in 25° 31′ N. and 83° 52′ E., on the Ganges, 18 miles south-east of Ghāzīpur town. Population (1901), 5,260. Bāra is a long, narrow, straggling town at the confluence of the Karamnāsā with the Ganges. Close by, on the banks of the smaller river, was fought the battle, usually known as Chausā Ghāt, between Humāyūn and Sher Shāh in 1539, which ended in the defeat and flight of the former. There are some old Hindu temples and a spacious *īdgāh*. Bāra has no trade; it contains two schools with about 77 pupils, of whom 22 are girls.

Bāra Bankī District.—District in the Fyzābād Division of the United Provinces, lying between 26° 31′ and 27° 21′ N. and 80° 56′ and 81° 52′ E., south-west of the Gogra, with an area of 1,758 square miles. It is bounded on the north-west by Sītāpur; on the north-east by the Gogra, which separates it from Bahraich and Gondā; on the south-east by Fyzābād and Sultānpur; on the south by Rāe Barelī; and on the west by Lucknow. Bāra Bankī consists of an almost level upland plain sloping gently from north-west to south-east. Along the Gogra is found a strip of alluvial soil, which in the north becomes broader and includes the whole valley of the Chaukā as far as its junction with the Gogra at Bahrāmghāt. This low area is liable to flooding, and exposes great areas of loose white river sand. The uplands, however, present a broad sheet of level cultivation, dotted with many small villages and hamlets, and set so thick with groves of mango that they seem to meet in every direction and form a background to a landscape full of quiet charm. The District is one of the most prosperous in the United Provinces. It possesses a fertile soil, excellent drainage, ample facilities for irrigation, and a thrifty and industrious peasantry. Excluding the Gogra, the chief river is the Gumtī, whose winding course traverses the south of the District, while the central portion is drained by its two tributaries, the Reth and Kalyānī. The banks of these streams are to some extent broken by ravines. Small shallow lakes and *jhīls* are numerous everywhere.

Physical aspects.

Bāra Bankī exposes nothing but alluvium, and *kankar* is the only stony formation.

The flora generally is that of the Gangetic plain. Scattered patches of *dhāk* (*Butea frondosa*) jungle occur, but their area has been much reduced by the spread of cultivation. A very large area is occupied by mango groves.

Close cultivation has reduced the number and variety of wild animals. Hog are still numerous in the tamarisk jungle along the Gogra and Chaukā, and *nīlgai* are occasionally seen in the same region. Jackals are common everywhere. During the cold season geese and duck abound, but other game-birds are rare. Fish are caught in the tanks, but the plentiful supply in the rivers is hardly touched.

Excluding the low-lying tracts near the Gogra, Bāra Bankī has a very healthy climate. Statistics of temperature are not kept; but the extremes of heat and cold are less marked than in the Districts farther west.

The annual rainfall averages nearly 40 inches, the eastern portion receiving the largest amount. Large fluctuations occur, and the recorded fall has varied from 23 to 64 inches.

Nothing is known of the ancient history of the District; but popular tradition connects the mounds, which are found in many places, with the Bhars. The Muhammadan conquest was effected earlier and more thoroughly than in most parts of Oudh. Saiyid Sālār, the hero of many popular ballads, is said to have fixed his head-quarters for a time at Satrikh, and several Musalmān families assign the settlement of their ancestors to this period. Other settlements were made in the thirteenth and fourteenth centuries, the Bhars being gradually crushed. It is noticeable that traditions of the occupation of large tracts by clans of Rājputs are less frequent here than in other parts of Oudh; and their conquests do not appear to have been made till the fifteenth century, when the country was the battle-ground between the kingdoms of Jaunpur and Delhi. Under Akbar the present District was divided between the *sarkārs* of Lucknow and Oudh in the *Sūbah* of Oudh, and Mānikpur which belonged to Allahābād. Its later history is chiefly a chronicle of the varying fortunes of the great families. In 1751 the Raikwārs, who had entered Barā Bankī during the reign of Akbar, rose against the rule of the Nawāb of Oudh, but were crushed after a fierce battle. For many years they remained out of possession of their former estates; but in the first half of the nineteenth century the lax government of the Oudh kings enabled them to recover a larger domain than had been theirs in 1751. The District, indeed, bore an evil reputation for turbulence and disorder. In jungles and ravines along the Gumtī and Kalyānī lay the strongholds of many banditti whose crimes are recorded in Sir W. Sleeman's *Diary*.

History.

In 1856 the District, with the rest of Oudh, came under British rule. During the Mutiny of 1857–8 the whole of the Bāra Bankī *talukdārs* joined the mutineers, but offered no serious resistance after the capture of Lucknow. At the battle of Nawābganj (June, 1858) the Raikwār *zamīndārs* of Sītāpur and Bahraich fought and fell with all the historic heroism of Rājputs. The Begam of Oudh, driven from Lucknow, had fled for refuge to their fort at Baundī, and these chivalrous chiefs were devoted to her cause. 'I have seen,' wrote the British general, 'many battles in India and many brave fellows fighting with a determination to conquer or die; but I never witnessed anything more magnificent than the conduct of these *zamīndārs*.' Order was re-established in July, 1858. In 1869–70 the District originally formed was increased by the addition of parts of Bahraich, Lucknow, Sultānpur, and Rāe Barelī.

The ancient sites of the District still await exploration. Numerous deposits of coins and a copperplate grant of Gobind Chand of Kanauj, dated in 1151, have been discovered. There are many tombs, mosques, and buildings dating from the Muhammadan period, but none of importance to the archaeologist.

Bāra Bankī contains 10 towns and 2,052 villages. The population at the four enumerations was as follows: (1869) 1,113,430, (1881) 1,026,788, (1891) 1,130,906, and (1901) 1,179,323. It is probable that the Census of 1869 overstated the truth, but Bāra Bankī suffered from scarcity in 1877–8. The increase during the last decade was comparatively high in all parts of the District, which is very densely populated. There are four *tahsīls*—Rāmsanehīghāt, Nawābganj, Fatehpur, and Haidargarh. The last three are named from the places at which their head-quarters are situated, while the *tahsīldār* of Rāmsanehīghāt resides at Chamierganj. The principal town is the municipality of Nawābganj, a mile from the town of Bāra Bankī, which contains the District courts and civil station. The following table gives the chief statistics of population in 1901 :—

Population.

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Rāmsanehīghāt	585	3	616	387,670	662	+ 2.7	9,476
Nawābganj .	361	5	390	254,160	704	+ 4.6	6,883
Fatehpur .	521	2	673	335,407	644	+ 6.2	8,213
Haidargarh .	291	...	373	202,086	694	+ 3.7	5,307
District total	1,758	10	2,052	1,179,323	671	+ 4.2	29,879

Hindus form 83 per cent. of the total, and Musalmāns 17 per cent. About 92 per cent. of the population speak the Awadhī dialect of Eastern Hindī, while Hindustāni is used by the remainder.

Kurmīs (agriculturists), 162,000, are the most numerous of the Hindu castes. Others largely represented are: Ahīrs (graziers and cultivators), 140,000; Pāsīs (toddy-drawers and labourers), 135,000; Chamārs (tanners and labourers), 92,000; Brāhmans, 86,000; Rājputs, 41,000; Lodhas (cultivators), 37,000; and Korīs (weavers), 25,000. Musalmāns include Shaikhs, 34,000; Julāhās (weavers), 31,000; Behnās (cotton-carders), 14,000; and Pathāns, 13,000. Agriculture supports 73 per cent. of the total population, and cotton-weaving nearly 3 per cent. Kurmīs, Brāhmans, Rājputs, Muraos, and Ahīrs are the principal cultivators.

Out of 144 native Christians enumerated in 1901, 139 were Methodists. The American Methodist Mission commenced work soon after the Mutiny and is the only missionary body in the District.

Agriculture.

In the lowland area between the Chaukā and the Gogra cultivation is very precarious, owing to the liability to flooding. West of the Chaukā and lower down the Gogra the alluvial soil is better, especially in dry years. The central part of the District forms the valley of the Kalyānī, which consists of rich loam

or clay, plentifully supplied with means of irrigation. The soil becomes more sandy as the Gumtī is approached. In the extreme south a tract of clay land is found resembling that in the adjoining District of Rāe Barelī. The Gumtī valley is flooded after heavy rain, which occasionally damages the low land near the bed of the river, but recovery is rapid.

The District is held on the tenures usually found in OUDH. *Talukdāri* estates include about 47 per cent. of the total area, while sub-settlement holders have about 8 per cent. The main agricultural statistics for 1903–4 are given below, in square miles:—

Tahsil.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Rāmsanehīghāt	585	400	144	59
Nawābganj	361	252	101	50
Fatehpur	521	353	113	69
Haidargarh	291	189	75	37
Total	1,758	1,194	433	215

Rice, gram, and wheat are the crops most largely grown, covering 339, 301, and 295 square miles, or 28 to 25 per cent. of the net cultivated area, respectively. Pulses (171 square miles), *kodon* and small millets (166), barley (89), peas and *masūr* (68), and maize (56) are also important. Poppy is grown on 44, and sugar-cane on 36 square miles.

The large area under the more valuable crops, such as poppy, rice, and wheat, testifies to the high standard of cultivation, which is hardly surpassed in any District of the United Provinces. There has been a considerable increase in the cultivated area during the last forty years, amounting to 15 or 20 per cent., and this has been attended by a still larger rise in the area double cropped. Barley has been replaced by wheat, and *jowār* by maize, while the area under rice, sugar-cane, and poppy has risen considerably. Drains have recently been made in one or two places where drainage was defective. Advances are readily taken under the Land Improvement and Agriculturists' Loans Acts, and amounted to a total of 4·9 lakhs during the ten years ending 1900, out of which 1·6 lakhs was advanced in 1896–7. Increased prosperity accounts for the falling off in the next four years, when an average of Rs. 2,000 was lent.

The cattle bred locally are of inferior quality, and the best are imported from Bahraich. There is no horse-breeding. Sheep are kept in comparatively small numbers, but goats are largely bred for food and for their hair.

Although it contains no canals, the District is unusually well protected by means of irrigation. In 1903–4 tanks and *jhīls* supplied 268 square miles, wells 153, and other sources 12. Practically speaking, every field which requires water gets it. The *jhīls* fail in exceptionally dry

years, but temporary wells can be made in nearly all parts. Thus in the autumn of 1896 about 20,000 earthen wells were dug by tenants with their own resources, or by aid of loans from Government and from estates under the Court of Wards. Irrigation from wells is increasing, and the District is now much less dependent on tanks than formerly. The lever or the pot and pulley is used in most parts to raise water; but in places where the spring-level is low a leathern bucket worked by bullocks is employed. Water is raised from tanks by the swing-basket.

Kankar or calcareous limestone is common in all parts, and is used for metalling roads and for making lime. Glass is manufactured from saline efflorescences.

Trade and communications.

The most important industry of the District is the weaving of cotton cloth. Cotton rugs are also manufactured, and an excellent class of cotton prints is turned out at Nawābganj. Iron sugar-mills are made at a factory at Bahrāmghāt; and brass vessels and small articles of metal, such as locks, betel-nut cutters, and tobacco-cutters, are made at one or two places. A little furniture is manufactured at Bahrāmghāt.

Bāra Bankī exports grain, raw sugar, hides, and cotton cloth of local manufacture, while it imports piece-goods and yarn, metals and hardware, and refined sugar. The trade is chiefly carried by railway; but there is also an immense traffic by cart with Lucknow, which absorbs much of the surplus grain of the District. A large quantity of timber passes through Bahrāmghāt. Nawābganj is the most considerable commercial centre, but bazars are springing up at the railway stations and taking the place of the older markets.

The loop line of the Oudh and Rohilkhand Railway from Benares to Lucknow passes across the District, and a branch from Nawābganj runs to Bahrāmghāt on the Gogra. A narrow-gauge line belonging to the same railway runs from Lucknow to Burhwal, where it meets the Bengal and North-Western Railway, which crosses the Gogra by a magnificent bridge, 3,695 feet in length. A branch of the Bengal and North-Western Railway from Burhwal to Sītāpur is under consideration. The District is well supplied with roads. Out of a total length of 632 miles, 161 are metalled. The latter are in charge of the Public Works department, but the cost of all but 47 miles is charged to Local funds. Avenues of trees are maintained on 274 miles. The chief routes are the roads from Lucknow to Fyzābād, and from Nawābganj to Fatehpur, Bahrāmghāt, and Haidargarh.

Famine.

The increase in well-irrigation and improved communications have prevented the District from suffering severely from the effects of drought. Tradition relates that in 1837 famine was intense. Bāra Bankī escaped lightly in subsequent years of scarcity till 1877-8. Relief works were then opened, but

the numbers never rose above 6,500 in a day, and distress was severe only in the tract south of the Gumtī. The failure of the rains in 1896 actually benefited the lowlands, which had recently been damaged by the excessive rain of 1894. Much loss was, however, caused in the central tract, and still more in the south. Relief works were opened and the numbers rose as high as 42,000; but the spring crop of 1897 was saved by the number of wells made, and the total expenditure on relief was only 1·5 lakhs.

Administration.

The Deputy-Commissioner is usually assisted by four Deputy-Collectors recruited in India. Two officers of the Opium department are stationed in the District, and a *tahsīldār* resides at the head-quarters of each *tahsīl*.

There are two Munsifs and a Subordinate Judge for civil work. The District is included in the Civil Judgeship of Fyzābād and in the Sessions Judgeship of Lucknow. Crime is not on the whole of a serious nature, though rioting is more than usually prevalent, and murders occur with some frequency. Dacoities by regular gangs have taken place recently. Female infanticide was once common, but is not suspected now.

The first summary settlement involved the setting aside of *talukdārs* to a large extent. After the Mutiny their estates were restored and a second summary settlement was made, the demand being fixed at 11·9 lakhs. A survey was then carried out, which was followed by the first regular settlement between 1863 and 1868. The assessment was largely based on the actual rent-rolls, checked by rough estimates of the apparent value of each village and by rates applied to the area of different classes of soil. A revenue demand of 15·8 lakhs was proposed, which was reduced to 15·3 lakhs before confirmation. The latest revision was made between 1893 and 1898, preceded by a partial resurvey. The *pargana* of Bhitaulī is permanently settled with the Rājā of KAPŪRTHALA STATE as a reward for services in the Mutiny. Assessment was based as usual on the actual rent-rolls, the rates of money rents being applied to value the 'assets' of similar land where money rents were not paid. The result of the revision was to fix a revenue of 20·3 lakhs, the incidence being Rs. 1·8 per acre, varying from Rs. 1·5 to Rs. 2·4 in different *parganas*.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	16,77	15,58	18,93	19,72
Total revenue .	18,39	20,88	25,02	26,68

There is one municipality, NAWĀBGANJ, and nine towns are adminis-

tered under Act XX of 1856. Beyond the limits of these, local affairs are managed by the District board, which in 1903–4 had an income of 1·3 lakhs, chiefly derived from rates, and an expenditure of 1·4 lakhs, of which Rs. 80,000 was spent on roads and buildings.

The District Superintendent of police has under him a force of 3 inspectors, 85 subordinate officers, and 312 constables, distributed in 12 police stations, besides 142 municipal and town police, and 2,626 rural and road police. The District jail had a daily average of 425 prisoners in 1903.

Bāra Bankī does not take a very high place as regards the literacy of its population, of whom 2·5 per cent. (4·8 males and 0·1 females) could read and write in 1901. The number of public schools fell from 145 in 1880–1 to 140 in 1900–1, but the number of pupils increased from 5,129 to 7,647. In 1903–4 there were 170 such schools with 8,317 pupils, of whom 401 were girls, besides 280 private schools with 1,998 pupils, including 96 girls. All of the pupils but 1,262 were in primary classes. Three schools are managed by Government and 127 by the District and municipal boards. The total expenditure on education was Rs. 54,000, of which Rs. 44,000 was provided from Local funds, and Rs. 8,000 by fees.

There are twelve hospitals and dispensaries, with accommodation for 68 in-patients. In 1903 the number of cases treated was 86,000, including 860 in-patients, and 3,881 operations were performed. The expenditure amounted to Rs. 17,000, chiefly met from Local funds.

In 1903–4, 30,000 persons were successfully vaccinated, representing the low average of 26 per 1,000 of population. Vaccination is compulsory only in the municipality of Nawābganj.

[C. W. W. Hope, *Settlement Report* (1899); H. R. Nevill, *District Gazetteer* (1904).]

Bāra Bankī Town.—Town in the Nawābganj *tahsīl* of Bāra Bankī District, situated in 26° 56′ N. and 81° 12′ E., on the Oudh and Rohilkhand Railway and on the Lucknow-Fyzābād road. Population (1901), 3,020. The place lies a mile north of NAWĀBGANJ TOWN, and is chiefly notable as giving its name to the District, and containing the courts, offices, and residences of the District officials. It is administered under Act XX of 1856, with an income of about Rs. 500.

Barābar Hills.—Hills on the northern boundary of the head-quarters subdivision of Gayā District, Bengal, lying between 25° 0′ and 25° 3′ N. and 85° 1′ and 85° 5′ E., 6 to 8 miles east of the Belā railway station on the Patna-Gayā branch of the East Indian Railway. The range contains many remarkable antiquarian remains. On the highest peak (Barābar) is an ancient temple sacred to Sidheswara, containing a *lingam* said to have been placed there by Bāna Rājā, the Asura king

of Kāmarūpa, whose bloody wars with Krishna still live in the remembrance of the people. A large fair, attended on an average by 15,000 persons, chiefly men, is held here in the month of Bhādra (September). The pilgrims begin to arrive at daybreak, and spend the day on the hill; the night is devoted to the worship of the image, and in the morning the crowd begins to disperse. To the south and near the base of this hill, the path up which is freely adorned with images of all kinds, lies a small recess enclosed on two sides by the mountain, on the third by an artificial barrier of stone, and on the fourth by a long low ridge of granite. Here in the solid rock have been cut the remarkable caves from which, it has been held, the glen derives its name of Sātghar ('seven houses'). The four caves found in this part of the mountain average 32 feet by 14 feet; three of them are chiselled to a wonderful polish, but the fourth was never finished. Inscriptions show that the oldest was cut in 252 B.C., and the others within the next thirty-six years; these are on another spur of the hill called Nagarjoni. Not far off is the sacred spring of Patalgangā, and at the base of the rugged peak of Kowādol ('crow's rocking stone') is an enormous figure of Buddha. The Kowādol peak is identified as the site of the ancient Buddhist monastery of Silābhadra visited by Hiuen Tsiang. Many other figures and sculptures are found among these hills, which have been fully described by Buchanan-Hamilton and General Cunningham. In the Bengal *Atlas* of Major Rennell, this cluster is called the Currumshaw hills; this name is a corruption of *Karnā-champar* or 'Karna's seat,' the name of an ancient ruin on the hill.

Bara Gali.—Small cantonment in Hazāra District, North-West Frontier Province, situated in 34° 10′ N. and 73° 30′ E., on the road between Abbottābād and Murree, 15 miles from Abbottābād and 25 from Murree. During the summer months it is occupied by one of the British mountain batteries which are stationed at Rāwalpindi in the winter.

Baragaon.—Village in the Bihār subdivision of Patna District, Bengal, situated in 25° 8′ N. and 85° 26′ E. Population (1901), 597. With the neighbouring village of Begampur, Baragaon contains masses of ruins. It has been identified with Vihāragrām, on the outskirts of which, more than a thousand years ago, flourished the Nālanda monastery, at that time the most magnificent and the most celebrated seat of Buddhist learning in the world. It was here that the Chinese traveller Hiuen Tsiang spent a great portion of his pilgrimage in receiving religious instruction.

[*Archaeological Survey Reports of India*, vol. i, pp. 16–34.]

Barāgaon.—Town in the District and *tahsīl* of Balliā, United Provinces. *See* CHĪT FĪROZPUR.

Barail ('big dike').—Range of hills in North Cāchār, Eastern

Bengal and Assam, running east and west between 25° 5′ and 25° 20′ N. and 92° 32′ and 93° 29′ E., and connecting the Jaintiā and Nāgā Hills. The range, which is for the most part composed of soft greenish sandstone, has sharply serrated ridges, and is covered with dense forest and bamboo jungle. Several of the peaks are nearly 6,000 feet in height. The Jātingā river makes its way through these hills to the Barāk, and the Assam-Bengal Railway has been carried up the valley of that river.

Barāk.—River of Assam. *See* SURMĀ.

Barākar.—River of Bengal. Rising on the north face of the central plateau of Chotā Nāgpur in 24° 7′ N. and 85° 18′ E., it flows in a northerly direction as far as the grand trunk road, after crossing which it turns east, and then south-east, until it leaves Hazāribāgh District and enters Mānbhūm. About 32 miles lower down it joins the Dāmodar, on the boundary of Burdwān and Mānbhūm Districts, in 23° 42′ N. and 86° 48′ E. In its course through Mānbhūm District, it recrosses the grand trunk road about 3 miles above the point of junction with the Dāmodar. Though everywhere fordable during the dry season, the Barākar is remarkable for the suddenness with which it rises during the rains, as well as for the strength of its current; and the construction of a bridge across it presents difficulties much more serious than could be inferred from its size. Boat traffic is impossible. The principal tributary is the Khudiā in Mānbhūm.

Barākar.—Village in the Asansol subdivision of Burdwān District, Bengal, situated in 23° 45′ N. and 86° 49′ E., on the left bank of the Barākar river. The population of Barākar proper in 1901 was 385, but the name is ordinarily understood to include several other villages with an aggregate population of nearly 5,000. Barākar is the site of the Bengal Iron and Steel Works, which employ 1,900 hands and had a total output in 1903–4 of 43,737 tons, valued at 24·6 lakhs. The main business is the manufacture of railway plant. The manufacture of steel was tried, but was abandoned as unprofitable in 1906. Messrs. John King & Co., Engineers and Founders, of Howrah, have also a branch here. Barākar contains several interesting remains, including some ancient stone temples.

[*Archaeological Survey Reports*, vol. viii, pp. 150–4.]

Bārā Lācha.—Mountain pass in the Lāhul canton of the Kulū subdivision of Kāngra District, Punjab, situated in 32° 49′ N. and 77° 28′ E., on the Central Asian trade route over the Western Himālayas, from Dārcha in Lāhul to the Rupshu country in Ladākh. The pass is 16,500 feet above the sea; but though the ascent on both sides is easy, it can be crossed by laden yaks and ponies only during the summer. The Chandra and Bhāga rivers (Chenāb) rise on either side of the pass.

Bāramahāl.—A name loosely applied in English histories to the north-eastern corner of Salem District, Madras, but no longer in use. The exact boundaries of the tract have been the subject of some discussion. It apparently included the *tāluks* of Tiruppattūr, Krishnagiri, Dharmapuri, and Uttangarai in Salem, and the Kangundi *zamīndāri* in North Arcot. Though usually called Bāramahāl, the name is explained as meaning 'twelve palaces' (*mahal*), and tradition says that it was derived from the fact that twelve hills within it were fortified by local chieftains; but of the various lists of these twelve forts no two agree. The first separate ruler of the tract is supposed to have been Jagadeva Rāya, father-in-law of one of the fallen kings of Vijayanagar, to whom it was granted by the king as a reward for his heroic defence of the fort of Penukonda against a Musalmān force. Later, Jagadeva's family fell upon evil days, and the Bāramahāl passed into the possession of Haidar Alī of Mysore, whose son ceded it to the British at the partition treaty of 1792. The name soon afterwards dropped out of use.

Bārāmati.—Town in the Bhīmthadi *tāluka* of Poona District, Bombay, situated in 18° 9′ N. and 74° 34′ E., about 50 miles south-east of Poona city. Population (1901), 9,407. The municipality, which was established in 1865, had an average income during the decade ending 1901 of Rs. 14,000. In 1903–4 the income was Rs. 32,000, chiefly derived from octroi (Rs. 18,000) and tolls (Rs. 4,000). The town contains a Subordinate Judge's court, a dispensary, and two English schools, including one for girls.

Barāmbā.—One of the Tributary States of Orissa, Bengal, lying between 20° 21′ and 20° 31′ N. and 85° 12′ and 85° 31′ E., with an area of 134 square miles. It is bounded on the north by Hindol; on the east by Tigiriā; on the south by Cuttack District and Khandparā (the boundary line being formed by the Mahānadī river); and on the west by Narsinghpur. Kanakā Peak (2,038 feet), the highest point of a hill range of the same name, is situated on the northern border. A legend attributes the foundation of the State to a celebrated wrestler, to whom the Orissa monarch presented two villages which were owned and inhabited by Khonds; the wrestler speedily drove out the aborigines and then extended his territory, which received further accessions in the time of his successors. The State yields a revenue of Rs. 43,000, and pays Rs. 1,398 as tribute to the British Government. The population increased from 32,526 in 1891 to 38,260 in 1901, of whom 37,441 were Hindus. A few Buddhists are still found in one or two villages. The most numerous castes are Chāsas (11,000) and Pāns (4,000). The population reside in 181 villages, and the density is 285 persons per square mile. The Mahānadī affords excellent water-carriage, and logs of timber and bamboos are floated down the river to Cuttack and

Purī Districts. A good fair-weather road connects Barāmbā with Narsinghpur on one side and Tigiriā on the other, joining the old Cuttack-Sambalpur road above Sankarpur in the Dhenkānāl State. Excellent cotton and silk cloth is manufactured at the village of Māniābundha. The State maintains a charitable dispensary, a middle vernacular school, and 2 upper primary and 44 lower primary schools.

Bāramūla.—Town in the State of Kashmīr, situated in 34° 13′ N. and 74° 23′ E. Population (1901), 5,866. Owing to its position as the river port of Kashmīr, this is a place of some importance; but in consequence of the opening of the cart-road from Bāramūla to Srīnagar, the boat traffic, on which the inhabitants chiefly depend, may in time decrease. It is situated on the left bank of the Jhelum, which is crossed at the east end of the town by an excellent bridge. The inhabitants are for the most part traders or shopkeepers. Bāramūla is very liable to earthquakes, and in 1885 it was almost reduced to ruins. The name is derived from the ancient city Vārahmūla, which stood on the right bank of the river along which the old route down the Jhelum used to run. Opposite, on the bank where the present Bāramūla stands, was the town of Hushkapura, founded by king Huvishka, the Kushan ruler, who succeeded Kanishka. The site of the ancient Hushkapura is about two miles to the south-east of the modern Bāramūla.

Bāran.—Head-quarters of the district of the same name in the State of Kotah, Rājputāna, situated in 25° 6′ N. and 79° 31′ E., on the left bank of the Bāngangā rivulet, a tributary of the Pārbatī, about 45 miles by metalled road almost due east of Kotah city. About half a mile to the west is the railway station, the present terminus of the Bīna-Bāran branch of the Great Indian Peninsula Railway. Population (1901), 7,892. The town, which is said to have been founded by the Solanki Rājputs in the fourteenth or fifteenth century, and to have been called by its present name because it was populated by the inhabitants of twelve (*bārah*) adjacent villages, is now the principal trade centre of the State, and possesses a combined post and telegraph office, two primary schools (one of them for girls), and a hospital with accommodation for twelve in-patients. A Government opium agency was established here in 1904, and in the following season 1,094 chests, or about 68 tons of opium, passed through the scales. Bāran is noted for its *chūndri bandish* or tie and dye work. The pattern is produced by knotting up with thread any portion of the cloth which is to escape being dyed; and as a separate knotting is required for each of the numerous colours, in the case of an elaborate design the delicacy and labour involved are enormous.

Baran.—Old name of BULANDSHAHR town and *tahsīl*, United Provinces.

Baranagar (*Barāhanagar*).—Town in the Barrackpore subdivision of the District of the Twenty-four Parganas, Bengal, situated in 22° 39′ N. and 88° 22′ E., on the east bank of the Hooghly river, 6 miles north of Calcutta. Population (1901), 25,432. Hindus number 19,581; Musalmāns, 5,697; and Christians, 142. Baranagar seems to have been originally a Portuguese settlement; but it afterwards became the seat of a Dutch factory, and during the greater part of the eighteenth century Dutch vessels anchored here on their way up to Chinsura. Old Dutch tiles of artistic design are still found in some of the native buildings in the neighbourhood. The town was ceded by the Dutch Government to the British in 1795, and the lands are comprised in the Government estate of Baranagar, contiguous to the Panchānnagrām estate. The lands are rented at Rs. 3 per *bīgha* (about one-third of an acre). Baranagar was formerly a favourite pleasure resort for European residents of Calcutta; but it is now a busy industrial suburb and contains two of the largest jute-mills on the Hooghly, while large quantities of castor-oil are manufactured for export to Europe.

A municipality was constituted in 1869, which was known for many years as the North Suburban municipality. On the formation of the COSSIPORE-CHITPUR municipality in 1889, the name was changed to Baranagar. In 1899 the municipality was divided into two portions, of which the northern became the KĀMĀRHĀTI municipality. Since the partition, the average income has been Rs. 42,000 and the expenditure Rs. 41,000. In 1903–4 the income was Rs. 43,000, including Rs. 19,000 derived from a tax on houses and lands, and Rs. 16,000 from a conservancy rate; and the expenditure was Rs. 49,000. The Victoria high school is situated within the town.

Barapole.—River in the south-west of Coorg, Southern India, with various local names in different parts. It rises in the Brahmagiri range in the south, and flows west through a deep mountain gorge. It forms a fine waterfall near the frontier of Coorg, along which it runs for some distance till joined by the Kalluhole descending from the north through the Heggala pass. The united stream enters Malabar, where it is called the Iritti and subsequently the VALARPATTANAM, and falls into the sea near Chirakkal.

Bārāsat Subdivision.—Subdivision of the District of the Twenty-four Parganas, Bengal, lying between 22° 33′ and 22° 56′ N. and 88° 25′ and 88° 47′ E., with an area of 275 square miles. The subdivision consists of a water-logged deltaic tract, which is very malarious, as many of the drainage channels are blocked, and there are numerous swamps and thick jungle. The population in 1901 was 264,300, the density being 961 persons per square mile. It contains two towns, BĀRĀSAT (population, 8,634), the head-quarters, and GOBARDĀNGA (5,865); and 724 villages. Bārāsat was formerly a separate magisterial District in

charge of a Joint-Magistrate. In 1861 the Joint-Magistracy was abolished, and Bārāsat became one of the subdivisions of the Twenty-four Parganas.

Bārāsat Town.—Head-quarters of the subdivision of the same name in the District of the Twenty-four Parganas, Bengal, situated in 22° 43′ N. and 88° 29′ E., 14 miles north-east of Calcutta. Population (1901), 8,634. The town is very unhealthy, and the inhabitants are gradually moving to Calcutta and the higher country on the banks of the Hooghly. In the early years of the nineteenth century, there was a college here for cadets on their first arrival from Europe; and, until 1861, Bārāsat was the head-quarters of a separate District. It was constituted a municipality in 1869. The income and expenditure during the decade ending 1901–2 averaged Rs. 10,500 and Rs. 10,000 respectively. In 1903–4 the income was Rs. 12,400, half of which was derived from a tax on vehicles, while a tax on persons brought in Rs. 3,000; the expenditure was Rs. 12,600. The town contains the usual public offices; the jail, which has accommodation for 130 prisoners, is a three-storeyed building, popularly known as 'Vansittart Villa,' as it was formerly the country residence of Mr. Vansittart, a civil servant in the time of Warren Hastings. Kāzīpāra, a suburb of the town, is the scene of an annual fair held in honour of a *Musalmān* saint, named Pīr Ekdil Sāhib, which is attended by Hindus as well as Muhammadans. A light railway has recently been constructed between the town and Basīrhāt.

Barauda (*Baroda*).—Village in the Gohāna *tahsīl* of Rohtak District, Punjab, situated in 29° 9′ N. and 76° 37′ E., on the Butāna branch of the Western Jumna Canal. Population (1901), 5,836.

Baraunda (or Pāthar-Kachhār).—A petty *sanad* State in Central India, under the Political Agent in Baghelkhand. It is now a small holding with an area of about 218 square miles, but was in former days much larger, and comprised most of the present District of Bāndā, the family having held the country for at least 400 years. The name Pāthar-Kachhār is derived from its position on the skirts of the Vindhyas.

The family is an old one, and claims to belong to the Raghuvansī clan of the Solar division of Rājputs. The original seat of the family was Rāsin in Bāndā District, originally called Rājā Vāsīni, where there are many old remains. The early history is, however, very obscure. During the Bundelā supremacy the State appears to have been held on a *sanad* from Hirde Sāh of Pannā. On the accession of the British to the paramount power, Rājā Mohan Singh was recognized and confirmed in his territory by a *sanad* granted in 1807. Dying childless in 1827, he left the estate by will to his nephew, Sarabjīt Singh, who, although not formally adopted, was recognized by the

British Government, to the exclusion of his two elder brothers. In 1862 the chief received an adoption *sanad*, and in 1863 he ceded all land required for railways through his territory. Raghubar Dayāl Singh, who was chief in 1877, obtained the personal distinction of Rājā Bahādur and a salute of 9 guns, the latter distinction being made hereditary in 1878. He died in 1885 without issue, and without exercising the right of adoption; but the Government selected the present chief, Rājā Thākur Prasād Singh, who succeeded in 1886. The ruler of the State bears the title of Rājā and receives a salute of 9 guns.

Population has been: (1881) 17,283, (1891) 18,596, and (1901) 15,724. The population decreased by 15 per cent. during the last decade owing to famine. Hindus number 14,189, or 90 per cent.; and Animists, 1,351, or 9 per cent. The State contains 70 villages. The prevailing language is Baghelkhandī, spoken by 91 per cent. of the inhabitants. Agriculture supports 90 per cent. of the total population. Of the total area, 31 square miles, or 14 per cent., are cultivated; 57 square miles are cultivable but uncultivated; and the rest is forest and waste land. The total revenue is Rs. 15,000, of which Rs. 14,000 is derived from land. Baraundā, the capital, is situated in 25° 3′ N. and 80° 38′ E., in a somewhat rugged tract 10 miles north of Kālinjar; it contains a vernacular school. Population (1901), 1,365.

Baraut.—Town in the Bāghpat *tahsīl* of Meerut District, United Provinces, situated in 29° 6′ N. and 77° 16′ E., 27 miles north-west of Meerut city. Population (1901), 7,703. During the Mutiny some of the Jāts who owned the town were conspicuous for disloyalty, and their property was confiscated and now forms part of the SARDHANA ESTATE. The town is situated in a network of canal distributaries, and irrigation is forbidden near it for sanitary considerations. The American Presbyterian Mission has a branch here. Baraut was administered as a municipality from 1870 to 1904, the average income and expenditure being about Rs. 6,500. Under its new constitution as a 'notified area,' a tax on circumstances and property has been substituted for octroi. Iron buckets and cauldrons are made here, and there was formerly a large trade in *ghī* and safflower. In 1904 the town contained a middle school with 120 pupils, and three aided primary schools with 140 pupils.

Bardā Hills.—Hills in Kāthiāwār, Bombay, about 18 miles distant from the coast, near Porbandar. They form a circular cluster about 30 miles in circumference, and are visible from a distance of from 25 to 30 miles. From the north they appear grouped in three distinct peaks. The most westerly, called Venu, is the highest, rising to about 1,730 feet above the sea. The well-watered and bamboo-covered slopes of the Bardā Hills formed in the disturbed times a favourable refuge for outlaws.

Bardī.—*Tahsīl* of the Rewah State, Central India, lying between 23° 47′ and 24° 41′ N. and 81° 37′ and 82° 51′ E., with an area of 2,912 square miles. The country is for the most part cut up by a series of parallel ridges covered with heavy forest. Cultivation is but little practised, except on the plateau and in the valleys. The Son river, its tributary the Gopat, and many smaller streams flow through the *tahsīl.* Population fell from 243,203 in 1891 to 198,821 in 1901, giving a density of 68 persons per square mile. There are 848 villages, the head-quarters being at SIHĀWAL. The land revenue is 1·6 lakhs.

Bārdoli Tāluka.—*Tāluka* of Surat District, Bombay, lying between 20° 56′ and 21° 14′ N. and 73° 0′ and 73° 21′ E., with an area of 222 square miles. The population in 1901 was 80,678, compared with 84,111 in 1891. The *tāluka* contains one town, BĀRDOLI (population, 5,172), the head-quarters; and 123 villages. Land revenue and cesses amounted in 1903–4 to more than 5 lakhs. There are no alienated villages in Bārdoli, which forms a richly wooded plain, with stretches of grass land covered with date-palm and *babūl*-trees. Towards the west the *tāluka* has the benefit of the sea-breeze, and is well supplied with water. The climate of the eastern part is hotter and somewhat feverish.

Bardoli Town.—Head-quarters of the *tāluka* of the same name in Surat District, Bombay, situated in 21° 7′ N. and 73° 7′ E., on the Tāpti Valley Railway, 19 miles from Surat city. Population (1901), 5,172. It has a temple of Kedāreshwar about four centuries old, on the site of a previously existing shrine of great antiquity. A fair, held annually, is attended by over 5,000 pilgrims. The town contains a dispensary and three schools, two for boys and one for girls, attended by 241 and 86 pupils respectively.

Bardwān.—Division, District, subdivision, estate, and town in Bengal. *See* BURDWĀN.

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